=> fil reg
FILE 'REGISTRY' ENTERED AT 16:23:59 ON 24 OCT 2006

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 23 OCT 2006 HIGHEST RN 911100-17-9
DICTIONARY FILE UPDATES: 23 OCT 2006 HIGHEST RN 911100-17-9

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

=> d ide can tot

L64 ANSWER 1 OF 8 REGISTRY COPYRIGHT 2006 ACS on STN
RN **155534-31-9** REGISTRY
ED Entered STN: 03 Jun 1994
CN Aluminum alloy, base, Al 97,Mg 1,Si 1,Mn 0.3,Cu 0.2,Cr 0.1 (9CI) (CA INDEX NAME)
MF Al . Cr . Cu . Mg . Mn . Si
CI AYS
SR CA
LC STN Files: CA, CAPLUS

Component	Component Percent	Component Registry Number
Al	97	7429-90-5
Mg	1	7439-95-4
Si	1	7440-21-3
Mn	0.3	7439-96-5
Cu	0.2	7440-50-8
Cr	0.1	7440-47-3

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 121:115245

L64 ANSWER 2 OF 8 REGISTRY COPYRIGHT 2006 ACS on STN
RN **94197-28-1** REGISTRY
ED Entered STN: 20 Feb 1985
CN Aluminum alloy, base, Al 98-99,Mg 0.35-0.6,Si 0.30-0.6,Fe 0.10-0.30,Zn 0-0.15,Cu 0-0.10,Mn 0-0.10,Ti 0-0.10,Cr 0-0.05 (AA 6060) (9CI) (CA INDEX NAME)
OTHER NAMES:

CN 63S
CN A-GS
CN AA 6060
CN AA 6060-T6
CN AlMgSi
CN AlMgSi0.5
CN ASTM B221-6060
CN DIN 3.3206
CN EN AW 6060
CN G50S
CN ISO AlMgSi
CN SIS 4103
CN SS 4103
CN UNI 3569
CN UNS A96060
MF Al . Cr . Cu . Fe . Mg . Mn . Si . Ti . Zn
CI AYS
LC STN Files: AGRICOLA, CA, CAPLUS, PROMT, TOXCENTER, USPATFULL

Component	Component Percent	Component Registry Number
Al	98 - 99	7429-90-5
Mg	0.35 - 0.6	7439-95-4
Si	0.30 - 0.6	7440-21-3
Fe	0.10 - 0.30	7439-89-6
Zn	0 - 0.15	7440-66-6
Cu	0 - 0.10	7440-50-8
Mn	0 - 0.10	7439-96-5
Ti	0 - 0.10	7440-32-6
Cr	0 - 0.05	7440-47-3

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

228 REFERENCES IN FILE CA (1907 TO DATE)
229 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 145:361250

REFERENCE 2: 145:275774

REFERENCE 3: 145:275690

REFERENCE 4: 145:253335

REFERENCE 5: 145:253303

REFERENCE 6: 145:253261

REFERENCE 7: 145:233783

REFERENCE 8: 145:107816

REFERENCE 9: 145:49423

REFERENCE 10: 145:31670

L64 ANSWER 3 OF 8 REGISTRY COPYRIGHT 2006 ACS on STN
RN **72939-77-6** REGISTRY

ED Entered STN: 16 Nov 1984
CN Aluminum alloy, base, (AA 6000) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN AA6000
CN JIS 6000
MF Unspecified
CI AYS, MAN
LC STN Files: CA, CAPLUS, PROMT, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

76 REFERENCES IN FILE CA (1907 TO DATE)
77 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 145:318884

REFERENCE 2: 145:296996

REFERENCE 3: 145:296968

REFERENCE 4: 145:233914

REFERENCE 5: 144:492863

REFERENCE 6: 144:132732

REFERENCE 7: 144:25752

REFERENCE 8: 143:444700

REFERENCE 9: 143:370924

REFERENCE 10: 143:310077

L64 ANSWER 4 OF 8 REGISTRY COPYRIGHT 2006 ACS on STN
RN **37268-38-5** REGISTRY
ED Entered STN: 16 Nov 1984
CN Aluminum alloy, base, Al 99.45-100,Fe 0-0.55,Si 0-0.55,Cu 0-0.05,Mg 0-0.05,Mn 0-0.05,Zn 0-0.05,Ti 0-0.03 (AA 1145) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN A91145
CN AA 1145
CN AD 1
CN AD 1M
CN AD1N
CN Al-AD-1
CN Al99.45
CN Alloy 1145
CN AMS 4011
CN ASTM B373-1145
CN ASTM B479-1145
CN UNS A91145
MF Al . Cu . Fe . Mg . Mn . Si . Ti . Zn
CI AYS
LC STN Files: CA, CAPLUS, CHEMLIST, IFICDB, IFIPAT, IFIUDB, MSDS-OHS, TOXCENTER, USPAT2, USPATFULL

Component Component Component

	Percent	Registry Number
Al	99.45 - 100	7429-90-5
Fe	0 - 0.55	7439-89-6
Si	0 - 0.55	7440-21-3
Cu	0 - 0.05	7440-50-8
Mg	0 - 0.05	7439-95-4
Mn	0 - 0.05	7439-96-5
Zn	0 - 0.05	7440-66-6
Ti	0 - 0.03	7440-32-6

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

509 REFERENCES IN FILE CA (1907 TO DATE)
509 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 145:319047

REFERENCE 2: 145:257805

REFERENCE 3: 145:67228

REFERENCE 4: 145:65031

REFERENCE 5: 144:395977

REFERENCE 6: 144:377819

REFERENCE 7: 144:374330

REFERENCE 8: 144:374329

REFERENCE 9: 144:374328

REFERENCE 10: 144:354430

L64 ANSWER 5 OF 8 REGISTRY COPYRIGHT 2006 ACS on STN
RN **12720-80-8** REGISTRY
ED Entered STN: 16 Nov 1984
CN Aluminum alloy, base, Al 93-96,Mg 3.5-4.5,Mn 0.20-0.7,Fe 0-0.50,Si 0-0.40,Cr 0.05-0.25,Zn 0-0.25,Ti 0-0.15,Cu 0-0.10 (AA 5086) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN A-G4MC
CN A5086-H18
CN AA 5086
CN AA 5086-H36
CN AA 5086-H38
CN Al4Mg
CN AlMg4
CN AlMg4Mn
CN ASME SB209-5086
CN ASTM B209-5086
CN ASTM B210-5086
CN ASTM B221-5086
CN ASTM B241-5086
CN ASTM B313-5086
CN ASTM B345-5086
CN ASTM B361-5086

CN ASTM B547-5086
CN ASTM B548-5086
CN DIN 3.3545
CN E54S
CN GM 40
CN Hindal 5086
CN JIS 5086
CN L-3322
CN Nautal
CN P-AG 4.4
CN PA 44
CN Peraluman 410
CN SB209-5086
CN SB221-5086
CN SB241-5086
CN U-5086
CN UNI 5452
CN UNS A95086
DR 475737-29-2, 12604-88-5, 54309-77-2, 65682-78-2, 71910-97-9
MF Al . Cr . Cu . Fe . Mg . Mn . Si . Ti . Zn
CI AYS
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, PROMT, TOXCENTER, USPAT2, USPATFULL

Component	Component Percent	Component Registry Number
Al	93 - 96	7429-90-5
Mg	3.5 - 4.5	7439-95-4
Mn	0.20 - 0.7	7439-96-5
Fe	0 - 0.50	7439-89-6
Si	0 - 0.40	7440-21-3
Cr	0.05 - 0.25	7440-47-3
Zn	0 - 0.25	7440-66-6
Ti	0 - 0.15	7440-32-6
Cu	0 - 0.10	7440-50-8

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

346 REFERENCES IN FILE CA (1907 TO DATE)
346 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 145:340027

REFERENCE 2: 145:67354

REFERENCE 3: 145:67273

REFERENCE 4: 144:454194

REFERENCE 5: 144:437895

REFERENCE 6: 144:415519

REFERENCE 7: 144:316114

REFERENCE 8: 144:204412

REFERENCE 9: 143:408914

REFERENCE 10: 143:334586

L64 ANSWER 6 OF 8 REGISTRY COPYRIGHT 2006 ACS on STN
RN **12616-83-0** REGISTRY
ED Entered STN: 16 Nov 1984
CN Aluminum alloy, base, Al 96-98,Mg 2.2-2.8,Fe 0-0.40,Cr 0.15-0.35,Si 0-0.25,Cu 0-0.10,Mn 0-0.10,Zn 0-0.10 (AA 5052) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 5052N
CN 5052O
CN 5052W
CN 52S
CN 57S
CN A 5052O
CN A-G2.5C
CN A2P1
CN A5052
CN A5052-H32
CN A5052-H34
CN A5052H
CN A5052P
CN A5052P-H34
CN A5052S
CN AA 2052
CN AA 5052
CN AA 52S
CN Al2.5Mg
CN AlMg2.5
CN AlMg2.5Cr
CN AlMg2Cr
CN AMg
CN AMgAP
CN AMS 4004
CN AMS 4015
CN AMS 4016
CN AMS 4017
CN AMS 4175
CN ASME SB209-5052
CN ASTM B209-5052
CN ASTM B210-5052
CN ASTM B211-5052
CN ASTM B221-5052
CN ASTM B234-5052
CN ASTM B241-5052
CN ASTM B313-5052
CN ASTM B316-5052
CN ASTM B404-5052
CN ASTM B483-5052
CN ASTM B547-5052
CN ASTM B548-5052
CN DIN 3.3524
CN GR 20
CN Hindal 5052
CN Indal 57S
CN JIS 5052
CN JIS A2P1
CN JIS A5052
CN JIS A5052P
ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for

DISPLAY
DR 12615-47-3, 12632-90-5, 12661-54-0, 12662-90-7, 11106-87-9, 54261-61-9, 59231-51-5, 119631-15-1, 37188-16-2, 37326-55-9, 37374-47-3, 67701-56-8, 179560-06-6
MF Al . Cr . Cu . Fe . Mg . Mn . Si . Zn
CI AYS
LC STN Files: BIOSIS, CA, CAPLUS, CIN, IFICDB, IFIPAT, IFIUDB, TOXCENTER, USPAT2, USPATFULL

Component	Component Percent	Component Registry Number
Al	97 - 98	7429-90-5
Mg	2.2 - 2.8	7439-95-4
Fe	0 - 0.40	7439-89-6
Cr	0.15 - 0.35	7440-47-3
Si	0 - 0.25	7440-21-3
Cu	0 - 0.10	7440-50-8
Mn	0 - 0.10	7439-96-5
Zn	0 - 0.10	7440-66-6

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2439 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2440 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 145:361221

REFERENCE 2: 145:361191

REFERENCE 3: 145:361128

REFERENCE 4: 145:358195

REFERENCE 5: 145:358037

REFERENCE 6: 145:340204

REFERENCE 7: 145:340002

REFERENCE 8: 145:339982

REFERENCE 9: 145:339855

REFERENCE 10: 145:337515

L64 ANSWER 7 OF 8 REGISTRY COPYRIGHT 2006 ACS on STN
RN **12616-75-0** REGISTRY
ED Entered STN: 16 Nov 1984
CN Aluminum alloy, base, Al 96-99,Mg 0.8-1.2,Si 0.40-0.8,Fe 0-0.7,Cu 0.15-0.40,Cr 0.04-0.35,Zn 0-0.25,Mn 0-0.15,Ti 0-0.15 (AA 6061) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 6061 AJ
CN 61S
CN 61S-T6
CN 65S
CN A 6061S-T5

CN A-SGUC
CN A2B4
CN A6061
CN A6061P
CN A6061P-T651
CN A6061S-T6
CN AA 6061
CN AA 6061-T651
CN AA6061-F
CN AD 33
CN AD 33M
CN AD 33T1
CN AD33T
CN Al 6061
CN Al 6061-T6
CN Alcoa 6061
CN Alloy 1330
CN AlMg1SiCu
CN AlMgSiCu
CN AMC600xb
CN AMS 4009
CN AMS 4025
CN AMS 4026
CN AMS 4080
CN ASME SB209-6061
CN ASTM B209-6061
CN ASTM B210-6061
CN ASTM B211-6061
CN ASTM B221-6061
CN ASTM B234-6061
CN ASTM B241-6061
CN ASTM B247-6061
CN DIN 3.3211
CN DIN 3.3214
CN EN AW 6061
CN GS11N
CN HE 20
CN Indal 65S
CN ISO AlMg1SiCu
CN L 3420
CN L 69
CN PA 45
CN SB209-6061
CN SB210-6061
ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for DISPLAY
DR 872342-14-8, 11145-17-8, 120946-50-1, 51835-84-8, 65892-55-9, 37269-78-6, 81161-91-3, 39366-72-8, 39366-73-9
MF Al . Cr . Cu . Fe . Mg . Mn . Si . Ti . Zn
CI AYS
LC STN Files: BIOSIS, CA, CAPLUS, CIN, IFICDB, IFIPAT, IFIUDB, PIRA, PROMT, TOXCENTER, USPAT2, USPATFULL

Component	Component Percent			Component Registry Number
Al	96	-	99	7429-90-5
Mg	0.8	-	1.2	7439-95-4
Si	0.40	-	0.8	7440-21-3
Fe	0	-	0.7	7439-89-6

Cu	0.15	-	0.40	7440-50-8
Cr	0.04	-	0.35	7440-47-3
Zn	0	-	0.25	7440-66-6
Mn	0	-	0.15	7439-96-5
Ti	0	-	0.15	7440-32-6

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

6091 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
6097 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 145:361218

REFERENCE 2: 145:361199

REFERENCE 3: 145:361146

REFERENCE 4: 145:361133

REFERENCE 5: 145:360974

REFERENCE 6: 145:360966

REFERENCE 7: 145:346636

REFERENCE 8: 145:340039

REFERENCE 9: 145:340025

REFERENCE 10: 145:339991

L64 ANSWER 8 OF 8 REGISTRY COPYRIGHT 2006 ACS on STN
RN **11146-15-9** REGISTRY
ED Entered STN: 16 Nov 1984
CN Aluminum alloy, base, Al 97-98,Mn 1.0-1.5,Fe 0-0.7,Si 0-0.6,Cu 0.05-0.20,Zn 0-0.10 (AA 3003) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 3003 AG
CN A 3003
CN A 3003S
CN A-M1
CN A3003P-O
CN AA 3003
CN Alcoa 3003
CN Alloy 1400
CN Alloy 3003 H14
CN AlMn1
CN AlMnCu
CN Aluman 103
CN AM-1
CN AMc
CN AMS 4006
CN AMTs
CN AMtsAM
CN AMtsAP
CN AMtsM
CN AMtsN2
CN AMtsP

CN ASME SB209-3003
CN ASTM B209-3003
CN ASTM B210-3003
CN ASTM B211-3003
CN ASTM B234-3003
CN ASTM B247-3003
CN ASTM B313-3003
CN ASTM B316-3003
CN ASTM B345-3003
CN ASTM B404-3003
CN ASTM B483-3003
CN ASTM B491-3003
CN ASTM B547-3003
CN AWS E3003
CN BA 3003
CN CSN 42 4432
CN D3S
CN DIN 3.0517
CN E3003
CN ISO AlMn1Cu
CN JIS 3003
CN JIS 3003-H14
CN JIS A3003
CN K383
CN L-3810
CN LF21
CN M11
CN MC10
ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for DISPLAY
DR 12719-48-1, 12719-54-9, 171757-47-4, 55893-23-7, 62656-03-5, 94504-84-4, 51258-27-6, 61115-08-0, 37374-46-2, 72067-08-4, 82641-38-1, 83651-79-0, 39360-69-5, 157451-80-4, 181428-96-6, 245366-61-4
MF Al . Cu . Fe . Mn . Si . Zn
CI AYS
LC STN Files: AGRICOLA, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, PROMT, TOXCENTER, USPAT2, USPATFULL

Component	Component Percent			Component Registry Number
Al	97	-	99	7429-90-5
Mn	1.0	-	1.5	7439-96-5
Fe	0	-	0.7	7439-89-6
Si	0	-	0.6	7440-21-3
Cu	0.05	-	0.20	7440-50-8
Zn	0	-	0.10	7440-66-6

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2455 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2456 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 145:361176

REFERENCE 2: 145:347161

REFERENCE 3: 145:324924

REFERENCE 4: 145:319028

REFERENCE 5: 145:318036

REFERENCE 6: 145:275780

REFERENCE 7: 145:275773

REFERENCE 8: 145:275762

REFERENCE 9: 145:257805

REFERENCE 10: 145:253265

=> fil hcaplus
FILE 'HCAPLUS' ENTERED AT 16:24:10 ON 24 OCT 2006

FILE COVERS 1907 - 24 Oct 2006 VOL 145 ISS 18
FILE LAST UPDATED: 23 Oct 2006 (20061023/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d bib abs hitstr retable tot 163

L63 ANSWER 1 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:453711 HCAPLUS
DN 142:484860
TI **Battery** including aluminum components
IN **Berkowitz, Fred J.**; **Issaev, Nikolai N.**; Janik, Jaroslav; **Pozin, Michael**
PA USA
SO U.S. Pat. Appl. Publ., 14 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005112468	A1	20050526	US 2003-719056	20031124 <--
	WO 2005053066	A1	20050609	WO 2004-US38464	20041117 <--

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,

CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO,
SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
NE, SN, TD, TG

EP 1687864 A1 20060809 EP 2004-811248 20041117 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS

PRAI US 2003-719056 A1 20031124 <--
WO 2004-US38464 W 20041117

AB A **primary** lithium **battery** can include a **current collector** that includes aluminum, a pos. lead that includes aluminum, or both. The aluminum **battery** components can have high mech. strength and low elec. resistance.

IT **11146-15-9**, AA 3003 **12616-75-0**, AA 6061
12616-83-0, AA 5052 **37268-38-5**, AA 1145
72939-77-6
RL: DEV (Device component use); USES (Uses)
(**battery** including aluminum components)

RN 11146-15-9 HCAPLUS

CN Aluminum alloy, base, Al 97-98,Mn 1.0-1.5,Fe 0-0.7,Si 0-0.6,Cu 0.05-0.20,Zn 0-0.10 (AA 3003) (9CI) (CA INDEX NAME)

Component	Component Percent			Component Registry Number
Al	97	-	99	7429-90-5
Mn	1.0	-	1.5	7439-96-5
Fe	0	-	0.7	7439-89-6
Si	0	-	0.6	7440-21-3
Cu	0.05	-	0.20	7440-50-8
Zn	0	-	0.10	7440-66-6

RN 12616-75-0 HCAPLUS

CN Aluminum alloy, base, Al 96-99,Mg 0.8-1.2,Si 0.40-0.8,Fe 0-0.7,Cu 0.15-0.40,Cr 0.04-0.35,Zn 0-0.25,Mn 0-0.15,Ti 0-0.15 (AA 6061) (9CI) (CA INDEX NAME)

Component	Component Percent			Component Registry Number
Al	96	-	99	7429-90-5
Mg	0.8	-	1.2	7439-95-4
Si	0.40	-	0.8	7440-21-3
Fe	0	-	0.7	7439-89-6
Cu	0.15	-	0.40	7440-50-8
Cr	0.04	-	0.35	7440-47-3
Zn	0	-	0.25	7440-66-6
Mn	0	-	0.15	7439-96-5
Ti	0	-	0.15	7440-32-6

RN 12616-83-0 HCAPLUS

CN Aluminum alloy, base, Al 96-98,Mg 2.2-2.8,Fe 0-0.40,Cr 0.15-0.35,Si 0-0.25,Cu 0-0.10,Mn 0-0.10,Zn 0-0.10 (AA 5052) (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	97 - 98	7429-90-5
Mg	2.2 - 2.8	7439-95-4
Fe	0 - 0.40	7439-89-6
Cr	0.15 - 0.35	7440-47-3
Si	0 - 0.25	7440-21-3
Cu	0 - 0.10	7440-50-8
Mn	0 - 0.10	7439-96-5
Zn	0 - 0.10	7440-66-6

RN 37268-38-5 HCAPLUS
CN Aluminum alloy, base, Al 99.45-100,Fe 0-0.55,Si 0-0.55,Cu 0-0.05,Mg 0-0.05,Mn 0-0.05,Zn 0-0.05,Ti 0-0.03 (AA 1145) (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	99.45 - 100	7429-90-5
Fe	0 - 0.55	7439-89-6
Si	0 - 0.55	7440-21-3
Cu	0 - 0.05	7440-50-8
Mg	0 - 0.05	7439-95-4
Mn	0 - 0.05	7439-96-5
Zn	0 - 0.05	7440-66-6
Ti	0 - 0.03	7440-32-6

RN 72939-77-6 HCAPLUS
CN Aluminum alloy, base, (AA 6000) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L63 ANSWER 2 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:453710 HCAPLUS
DN 142:484859
TI **Battery** including aluminum components
IN **Berkowitz, Fred J.; Issaev, Nikolai N.; Pozin, Michael**
PA USA
SO U.S. Pat. Appl. Publ., 14 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2005112467	A1	20050526	US 2003-719025	20031124 <--
WO 2005053065	A1	20050609	WO 2004-US38840	20041119 <--

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1685610 A1 20060802 EP 2004-811543 20041119 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS
PRAI US 2003-719025 A1 20031124 <--
WO 2004-US38840 W 20041119 <--

AB A **primary** lithium **battery** can include a **current collector** that includes aluminum, a cap that includes aluminum, or both. The aluminum **battery** components can have high mech. strength and low elec. resistance.

IT **11146-15-9**, AA 3003 **12616-75-0**, AA 6061
12616-83-0, AA 5052 **37268-38-5**, AA 1145
72939-77-6
RL: DEV (Device component use); USES (Uses)
(**battery** including aluminum components)

RN 11146-15-9 HCAPLUS
CN Aluminum alloy, base, Al 97-98,Mn 1.0-1.5,Fe 0-0.7,Si 0-0.6,Cu 0.05-0.20,Zn 0-0.10 (AA 3003) (9CI) (CA INDEX NAME)

Component	Component Percent			Component Registry Number
Al	97	-	99	7429-90-5
Mn	1.0	-	1.5	7439-96-5
Fe	0	-	0.7	7439-89-6
Si	0	-	0.6	7440-21-3
Cu	0.05	-	0.20	7440-50-8
Zn	0	-	0.10	7440-66-6

RN 12616-75-0 HCAPLUS
CN Aluminum alloy, base, Al 96-99,Mg 0.8-1.2,Si 0.40-0.8,Fe 0-0.7,Cu 0.15-0.40,Cr 0.04-0.35,Zn 0-0.25,Mn 0-0.15,Ti 0-0.15 (AA 6061) (9CI) (CA INDEX NAME)

Component	Component Percent			Component Registry Number
Al	96	-	99	7429-90-5
Mg	0.8	-	1.2	7439-95-4
Si	0.40	-	0.8	7440-21-3
Fe	0	-	0.7	7439-89-6
Cu	0.15	-	0.40	7440-50-8
Cr	0.04	-	0.35	7440-47-3
Zn	0	-	0.25	7440-66-6
Mn	0	-	0.15	7439-96-5
Ti	0	-	0.15	7440-32-6

RN 12616-83-0 HCAPLUS
CN Aluminum alloy, base, Al 96-98,Mg 2.2-2.8,Fe 0-0.40,Cr 0.15-0.35,Si 0-0.25,Cu 0-0.10,Mn 0-0.10,Zn 0-0.10 (AA 5052) (9CI) (CA INDEX NAME)

Component	Component Percent			Component Registry Number
Al	97	-	98	7429-90-5
Mg	2.2	-	2.8	7439-95-4
Fe	0	-	0.40	7439-89-6
Cr	0.15	-	0.35	7440-47-3
Si	0	-	0.25	7440-21-3
Cu	0	-	0.10	7440-50-8
Mn	0	-	0.10	7439-96-5

Zn 0 - 0.10 7440-66-6

RN 37268-38-5 HCAPLUS
CN Aluminum alloy, base, Al 99.45-100,Fe 0-0.55,Si 0-0.55,Cu 0-0.05,Mg 0-0.05,Mn 0-0.05,Zn 0-0.05,Ti 0-0.03 (AA 1145) (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	99.45 - 100	7429-90-5
Fe	0 - 0.55	7439-89-6
Si	0 - 0.55	7440-21-3
Cu	0 - 0.05	7440-50-8
Mg	0 - 0.05	7439-95-4
Mn	0 - 0.05	7439-96-5
Zn	0 - 0.05	7440-66-6
Ti	0 - 0.03	7440-32-6

RN 72939-77-6 HCAPLUS
CN Aluminum alloy, base, (AA 6000) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L63 ANSWER 3 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:450737 HCAPLUS
DN 142:484841
TI **Battery** including aluminum components
IN **Issaev, Nikolai N.**; **Pozin, Michael**; Stevanovic, Maya
PA USA
SO U.S. Pat. Appl. Publ., 14 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005112274	A1	20050526	US 2003-719014	20031124 <--
	WO 2005055347	A2	20050616	WO 2004-US37689	20041110 <--
	WO 2005055347	A3	20060511		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, US				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1687862	A2	20060809	EP 2004-820016	20041110 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR, IS, YU				
PRAI	US 2003-719014	A1	20031124 <--		
	WO 2004-US37689	W	20041110		

AB A **primary** lithium **battery** can include a **current collector** that includes aluminum, a cap that includes aluminum, or both. The aluminum **battery** components can have high mech. strength and low elec. resistance.

IT **12616-75-0**, AA 6061 **37268-38-5**, AA 1145
72939-77-6, **AA6000**
RL: DEV (Device component use); USES (Uses)
(**battery** including **aluminum** components)
RN 12616-75-0 HCAPLUS
CN Aluminum alloy, base, Al 96-99,Mg 0.8-1.2,Si 0.40-0.8,Fe 0-0.7,Cu 0.15-0.40,Cr 0.04-0.35,Zn 0-0.25,Mn 0-0.15,Ti 0-0.15 (AA 6061) (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	96 - 99	7429-90-5
Mg	0.8 - 1.2	7439-95-4
Si	0.40 - 0.8	7440-21-3
Fe	0 - 0.7	7439-89-6
Cu	0.15 - 0.40	7440-50-8
Cr	0.04 - 0.35	7440-47-3
Zn	0 - 0.25	7440-66-6
Mn	0 - 0.15	7439-96-5
Ti	0 - 0.15	7440-32-6

RN 37268-38-5 HCAPLUS
CN Aluminum alloy, base, Al 99.45-100,Fe 0-0.55,Si 0-0.55,Cu 0-0.05,Mg 0-0.05,Mn 0-0.05,Zn 0-0.05,Ti 0-0.03 (AA 1145) (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	99.45 - 100	7429-90-5
Fe	0 - 0.55	7439-89-6
Si	0 - 0.55	7440-21-3
Cu	0 - 0.05	7440-50-8
Mg	0 - 0.05	7439-95-4
Mn	0 - 0.05	7439-96-5
Zn	0 - 0.05	7440-66-6
Ti	0 - 0.03	7440-32-6

RN 72939-77-6 HCAPLUS
CN Aluminum alloy, base, (AA 6000) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L63 ANSWER 4 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:6876 HCAPLUS
DN 140:97679
TI Undesirable corrosion damage on aluminum alloys
AU Zunkel, A.
CS Berlin, Germany
SO VDI-Berichte (**2003**), 1765(Korrosionsschaeden in der Industrie), 187-196
CODEN: VDIBAP; ISSN: 0083-5560
PB VDI Verlag GmbH
DT Journal
LA German
AB Damage scenarios of AlMgS alloy EN AW-6060 tram **current collectors** are studied. Pintercryst. corrosion was recognized as result of metallog. testings and Cu metal depositions has proven the corrosion generating element.
IT **94197-28-1**, EN AW-6060

RL: CPS (Chemical process); DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)
(corrosion damage scenarios of AlMgS alloy EN AW-6060 tram **current collectors**)
RN 94197-28-1 HCAPLUS
CN Aluminum alloy, base, Al 98-99,Mg 0.35-0.6,Si 0.30-0.6,Fe 0.10-0.30,Zn 0-0.15,Cu 0-0.10,Mn 0-0.10,Ti 0-0.10,Cr 0-0.05 (AA 6060) (9CI) (CA INDEX NAME)

Component	Component Percent			Component Registry Number
Al	98	-	99	7429-90-5
Mg	0.35	-	0.6	7439-95-4
Si	0.30	-	0.6	7440-21-3
Fe	0.10	-	0.30	7439-89-6
Zn	0	-	0.15	7440-66-6
Cu	0	-	0.10	7440-50-8
Mn	0	-	0.10	7439-96-5
Ti	0	-	0.10	7440-32-6
Cr	0	-	0.05	7440-47-3

RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Anon	1998			Grundlagen und Werks	
Anon	2001	1		INSITU - Werkstoffda	
Anon	1995			Korrosion und Korros	
Anon	1984			Richtlinie des Rates	
Korrosionsverhalten Met	1996			Vorlesungen uber Kor	
Lange, G	2001			Systematische Beurte	

L63 ANSWER 5 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:511913 HCAPLUS
DN 139:55564
TI Nonaqueous electrolyte secondary and **primary batteries**
IN **Issaev, Nikolai N.; Pozin, Michael**
PA USA
SO U.S. Pat. Appl. Publ., 19 pp., Cont.-in-part of U.S. Ser. No. 22,289.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003124421	A1	20030703	US 2003-361945	20030210 <--
	US 2003113622	A1	20030619	US 2001-22289	20011214 <--
PRAI	US 2001-22289	A2	20011214 <--		

AB An electrochem. secondary cell includes a cathode, an anode, a cathode **current collector** including stainless steel, and an electrolyte containing a perchlorate salt and a second salt. The steel is selected from: a 200 series stainless steel, a 300 series stainless steel, a 400 series stainless steel, and a cold roll steel. The perchlorate salt comprises LiClO4.
IT **37268-38-5**, Aa 1145
RL: DEV (Device component use); USES (Uses)
(nonaq. electrolyte secondary and **primary batteries**
)

RN 37268-38-5 HCAPLUS
CN Aluminum alloy, base, Al 99.45-100,Fe 0-0.55,Si 0-0.55,Cu 0-0.05,Mg 0-0.05,Mn 0-0.05,Zn 0-0.05,Ti 0-0.03 (AA 1145) (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	99.45 - 100	7429-90-5
Fe	0 - 0.55	7439-89-6
Si	0 - 0.55	7440-21-3
Cu	0 - 0.05	7440-50-8
Mg	0 - 0.05	7439-95-4
Mn	0 - 0.05	7439-96-5
Zn	0 - 0.05	7440-66-6
Ti	0 - 0.03	7440-32-6

IT **11146-15-9**, Aa 3003
RL: TEM (Technical or engineered material use); USES (Uses)
(nonaq. electrolyte secondary and **primary batteries**
)
RN 11146-15-9 HCAPLUS
CN Aluminum alloy, base, Al 97-98,Mn 1.0-1.5,Fe 0-0.7,Si 0-0.6,Cu 0.05-0.20,Zn 0-0.10 (AA 3003) (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	97 - 99	7429-90-5
Mn	1.0 - 1.5	7439-96-5
Fe	0 - 0.7	7439-89-6
Si	0 - 0.6	7440-21-3
Cu	0.05 - 0.20	7440-50-8
Zn	0 - 0.10	7440-66-6

L63 ANSWER 6 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:473078 HCAPLUS
DN 139:39164
TI Electrolyte additive for nonaqueous electrochemical cells for **batteries**
IN Blasi, Jane A.; **Issaev, Nikolai N.; Pozin, Michael**
PA USA
SO U.S. Pat. Appl. Publ., 13 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003113622	A1	20030619	US 2001-22289	20011214 <--
	WO 2003052845	A2	20030626	WO 2002-US39652	20021211 <--
	WO 2003052845	A3	20050303		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,

FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ,
CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU	2002360562	A1	20030630	AU 2002-360562	20021211 <--
EP	1527488	A2	20050504	EP 2002-795827	20021211 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, CY, TR, BG, CZ, EE, SK				
CN	1630959	A	20050622	CN 2002-824988	20021211 <--
JP	2005538498	T2	20051215	JP 2003-553641	20021211 <--
BR	2002014896	A	20060530	BR 2002-14896	20021211 <--
US	2003124421	A1	20030703	US 2003-361945	20030210 <--
US	2005089760	A1	20050428	US 2004-990379	20041117 <--
PRAI US	2001-22289	A1	20011214 <--		
WO	2002-US39652	W	20021211 <--		

AB An electrochem. secondary cell is disclosed. The cell includes a cathode, an anode, a **current collector** including aluminum, and an electrolyte containing a perchlorate salt and a second salt. The electrolyte is essentially free of LiPF6 .

IT **11146-15-9**, Aa 3003 **37268-38-5**, Aa 1145
RL: DEV (Device component use); USES (Uses)
(electrolyte additive for nonaq. electrochem. cells for **batteries**)

RN 11146-15-9 HCAPLUS
CN Aluminum alloy, base, Al 97-98,Mn 1.0-1.5,Fe 0-0.7,Si 0-0.6,Cu 0.05-0.20,Zn 0-0.10 (AA 3003) (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	97 - 99	7429-90-5
Mn	1.0 - 1.5	7439-96-5
Fe	0 - 0.7	7439-89-6
Si	0 - 0.6	7440-21-3
Cu	0.05 - 0.20	7440-50-8
Zn	0 - 0.10	7440-66-6

RN 37268-38-5 HCAPLUS
CN Aluminum alloy, base, Al 99.45-100,Fe 0-0.55,Si 0-0.55,Cu 0-0.05,Mg 0-0.05,Mn 0-0.05,Zn 0-0.05,Ti 0-0.03 (AA 1145) (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	99.45 - 100	7429-90-5
Fe	0 - 0.55	7439-89-6
Si	0 - 0.55	7440-21-3
Cu	0 - 0.05	7440-50-8
Mg	0 - 0.05	7439-95-4
Mn	0 - 0.05	7439-96-5
Zn	0 - 0.05	7440-66-6
Ti	0 - 0.03	7440-32-6

L63 ANSWER 7 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:446089 HCAPLUS
DN 139:298202
TI Influence of alloying additives on the performance of commercial grade aluminum as galvanic anode in alkaline zincate solution for use in **primary** alkaline **batteries**
AU Paramasivam, M.; Jayachandran, M.; Venkatakrishna Iyer, S.
CS Central Electrochemical Research Institute, Karaikudi, Tamilnadu, 630006,

India
SO Journal of Applied Electrochemistry (**2003**), 33(3-4), 303-309
CODEN: JAELBJ; ISSN: 0021-891X
PB Kluwer Academic Publishers
DT Journal
LA English
AB The self-corrosion of different grades of com. aluminum such as 2S, 3S, 26S and 57S in 4 M NaOH containing 0.6 M ZnO has been determined by weight loss measurements. It is found that 26S and 57S aluminum exhibit negligible corrosion rates in the range 0.05-0.06 mg cm-2 min-1, which can be attributed to the formation of a zincate coating on the aluminum surface. The influence of zincating on the performance of binary and ternary alloys of 26S and 57S aluminum obtained by incorporating alloying elements such as zinc, indium, thallium, gallium and tin as galvanic anode in 4 M NaOH containing 0.6 M ZnO has been examined by studying self corrosion, steady state open circuit potential, galvanostatic polarization and anode efficiency. It is found that zincated ternary alloys of 26S and 57S aluminum containing zinc and indium can serve as good galvanic anodes in alkaline medium. AC impedance measurements and X-ray diffraction studies have been carried out to understand the nature of the film formed on the aluminum surface.
IT **12616-83-0**, 57S
RL: CPS (Chemical process); DEV (Device component use); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent); USES (Uses)
(self-corrosion of com. aluminum in NaOH containing ZnO)
RN 12616-83-0 HCAPLUS
CN Aluminum alloy, base, Al 96-98,Mg 2.2-2.8,Fe 0-0.40,Cr 0.15-0.35,Si 0-0.25,Cu 0-0.10,Mn 0-0.10,Zn 0-0.10 (AA 5052) (9CI) (CA INDEX NAME)

Component	Component Percent			Component Registry Number
Al	97	-	98	7429-90-5
Mg	2.2	-	2.8	7439-95-4
Fe	0	-	0.40	7439-89-6
Cr	0.15	-	0.35	7440-47-3
Si	0	-	0.25	7440-21-3
Cu	0	-	0.10	7440-50-8
Mn	0	-	0.10	7439-96-5
Zn	0	-	0.10	7440-66-6

RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Bharathi, S	1989	5	33	Bull Electrochem	HCAPLUS
Blockstie, L	1963	110	267	J Electrochem Soc	
Bohnstedt, W	1980	5	245	J Power Sources	
Despic, A	1986	24	465	Ind J Tech	HCAPLUS
Despic, A	1979	7	15	Power Sources	
Drazic, D	1977	2	370	Ext Abstr 28th Meeti	HCAPLUS
Farooqi, I	1997		1128	Proceedings of the I	
Georgiev, Z	1978	25	189	Zh God Vissh Khim	
John Albert, I	1989	19	547	J Appl Electrochem	
Jovanovic, K	1979			US 4288500	HCAPLUS
Kapali, V	1969	4	305	Br Corros J	HCAPLUS
Kordesch Karl, K	1974			US 3850693	HCAPLUS
Krishnan, M	1978	7	184	Br Corros J	
MacArthen, D	1985	85-2	23	Ext Abstr 168th Fall	
Macdonald, D	1988	44	652	Corrosion	HCAPLUS

Macdonald, D	1987	87-2	194	Ext Abstr 172nd Fall	
Masayoshi, K	1970	38	753	J Electrochem Soc, o	
Paramasivam, M	1994	29	207	Br Corros J	HCAPLUS
Paramasivam, M	1991	21	452	J Appl Electrochem	HCAPLUS
Paramasivam, M	2001	31	115	J Appl Electrochem	HCAPLUS
Sarangapani, K	1984	14	475	J Appl Electrochem	HCAPLUS
Sarangapani, K	1985	26	67	Surf Technol	HCAPLUS
Sheik Mideen, A	1993	31	47	Ind J Tech	
Sheik Mideen, A	1988	27	235	J Power Sources	
Sundararajan, J	1961	17	35t	Corrosion	

L63 ANSWER 8 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:77115 HCAPLUS
DN 138:125005
TI Metal-cored bipolar separator and end plates for polymer electrolyte membrane electrochemical and fuel cells
IN Davis, Herbert John
PA Avantcell Technologies Inc., Can.
SO PCT Int. Appl., 25 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003009408	A1	20030130	WO 2002-CA1110	20020717 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2003027028	A1	20030206	US 2001-906715	20010718 <--
PRAI	US 2001-906715	A	20010718 <--		

AB Methods of treating the surface of metals, such as aluminum, so that they can withstand the corrosive conditions in polymer electrolyte membrane, including those types known as proton exchange membrane, fuel cells and similar electrochem. environments and still maintain a high level of elec. and thermal conductivity over extended periods of time, are disclosed. A conductive polymer outer layer used in combination with an intermediate layer between the conductive polymer and a core metal, that comprises a thin layer of silver, or other noble metal, at the interface between the conductive polymer and an underlying metal layer, are compatible with the requirements of PEM fuel cells. Such treated metals can be formed into bipolar plates or end plates after receiving the coatings, or the conductive polymer layer can be applied or shaped into specifically required forms, alternatively the core metal can be previously formed into the required phys. form and then treated on its surfaces so as to realize the benefits of this invention.

IT **11146-15-9**
RL: DEV (Device component use); USES (Uses)
(metal-cored bipolar separator and end plates for polymer electrolyte membrane electrochem. and fuel cells)

RN 11146-15-9 HCAPLUS
CN Aluminum alloy, base, Al 97-98,Mn 1.0-1.5,Fe 0-0.7,Si 0-0.6,Cu

0.05-0.20,Zn 0-0.10 (AA 3003) (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	97 - 99	7429-90-5
Mn	1.0 - 1.5	7439-96-5
Fe	0 - 0.7	7439-89-6
Si	0 - 0.6	7440-21-3
Cu	0.05 - 0.20	7440-50-8
Zn	0 - 0.10	7440-66-6

RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Aisin Takaoka Ltd	2000			DE 19946695 A	HCAPLUS
Allied Signal Inc	2001			WO 0128019 A	HCAPLUS
Bondface Technology Inc	2001			GB 2359186 A	HCAPLUS
Gen Motors Corp	1997			EP 0780916 A	HCAPLUS
Gen Motors Corp	2000			EP 1009051 A	HCAPLUS
Gen Motors Corp	2001			EP 1107340 A	HCAPLUS
Toyota Motor Co Ltd	1999			EP 0955686 A	HCAPLUS

L63 ANSWER 9 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:892798 HCAPLUS
DN 138:125725
TI Wear behavior of metallic and ceramic materials under electric sliding contact
AU Matsuyama, S.; Akakabe, T.; Ohba, H.
CS Toyo Electric MFG. Co. Ltd., Yokohama, 236-0004, Japan
SO International Journal of Applied Mechanics and Engineering (**2002**), 7(Spec. Issue), 389-395
CODEN: IJAMAJ
PB University of Zielona Gora
DT Journal
LA English
AB To obtain lighter materials for elec. train **current collectors**, simple screening tests have been performed using various materials in comparison with actual sliders. As a result, titanium carbide composite with flaky graphite and aluminum alloy matrix composite reinforced with Al2O3 fibers were selected as candidates. Both materials exhibit good wear resistance under conditions without **current**. However, when **current** is supplied, the wear loss tends to increases due to transference of copper from trolley for the former and due to forming of fused alloying layer with copper, especially in rainy condition, for the latter.
IT **12616-75-0**, Aa6061
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(composites with silicon carbide, **current collector**; wear behavior of metal-matrix and ceramic-matrix composites under elec. sliding contact)
RN 12616-75-0 HCAPLUS
CN Aluminum alloy, base, Al 96-99,Mg 0.8-1.2,Si 0.40-0.8,Fe 0-0.7,Cu 0.15-0.40,Cr 0.04-0.35,Zn 0-0.25,Mn 0-0.15,Ti 0-0.15 (AA 6061) (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number

Al	96	-	99	7429-90-5
Mg	0.8	-	1.2	7439-95-4
Si	0.40	-	0.8	7440-21-3
Fe	0	-	0.7	7439-89-6
Cu	0.15	-	0.40	7440-50-8
Cr	0.04	-	0.35	7440-47-3
Zn	0	-	0.25	7440-66-6
Mn	0	-	0.15	7439-96-5
Ti	0	-	0.15	7440-32-6

RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Endo, H	1988	6	301	FC Reports	
Matsuyama, S	1996	41	679	Jap J of Tribology	
Ono, T	1992	11	57	Materials System	

L63 ANSWER 10 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1999:298514 HCAPLUS
DN 130:327888
TI Manufacture of aluminum (alloy) sheet for square case
IN Noda, Kenji; Matsui, Kuniaki; Yoshizawa, Shigenori
PA Kobe Steel, Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11124659	A2	19990511	JP 1997-287420	19971020 <--
PRAI	JP 1997-287420		19971020 <--		

AB The manufacture involves cold rolling at draft 20-50%. The Al (alloy) sheet is useful for square cases for **batteries**, for example. Deformation of the case can be suppressed.
IT **11146-15-9**, A3003
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(cold rolling for manufacture of aluminum alloy sheet useful for square **battery** cases)
RN 11146-15-9 HCAPLUS
CN Aluminum alloy, base, Al 97-98,Mn 1.0-1.5,Fe 0-0.7,Si 0-0.6,Cu 0.05-0.20,Zn 0-0.10 (AA 3003) (9CI) (CA INDEX NAME)

Component	Component Percent			Component Registry Number
Al	97	-	99	7429-90-5
Mn	1.0	-	1.5	7439-96-5
Fe	0	-	0.7	7439-89-6
Si	0	-	0.6	7440-21-3
Cu	0.05	-	0.20	7440-50-8
Zn	0	-	0.10	7440-66-6

L63 ANSWER 11 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1999:182759 HCAPLUS
DN 130:254898

TI Sealing structure of sealed type **battery** and method for producing the sealing structure
IN Yamamoto, Keisuke
PA Mitsubishi Cable Industries, Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 11073931	A2	19990316	JP 1997-232914	19970828 <--
PRAI JP 1997-232914		19970828 <--		

AB This sealing structure is for a **battery** container and a **battery** cover made of an Al alloy and comprises a welding aid member made of Al or an Al alloy. The structure production method include a process of installing the welding aid member in the contact parts of the container and the cover and thermally joining the member to the contact parts. The container and the cover are air-tightly joined.
IT **12616-83-0**, A5052
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(container and cover made of; sealing structure of container and cover of sealed **primary battery**)
RN 12616-83-0 HCAPLUS
CN Aluminum alloy, base, Al 96-98,Mg 2.2-2.8,Fe 0-0.40,Cr 0.15-0.35,Si 0-0.25,Cu 0-0.10,Mn 0-0.10,Zn 0-0.10 (AA 5052) (9CI) (CA INDEX NAME)

Component	Component Percent			Component Registry Number
Al	97	-	98	7429-90-5
Mg	2.2	-	2.8	7439-95-4
Fe	0	-	0.40	7439-89-6
Cr	0.15	-	0.35	7440-47-3
Si	0	-	0.25	7440-21-3
Cu	0	-	0.10	7440-50-8
Mn	0	-	0.10	7439-96-5
Zn	0	-	0.10	7440-66-6

L63 ANSWER 12 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1999:171647 HCAPLUS
DN 130:243565
TI Corrosion of lithium-ion **battery current collectors**
AU Braithwaite, Jeffrey W.; Gonzales, Angelo; Nagasubramanian, Ganesan; Lucero, Samuel J.; Peebles, Diane E.; Ohlhausen, James A.; Cieslak, Wendy R.
CS Sandia National Laboratories, Albuquerque, NM, 87185-0340, USA
SO Journal of the Electrochemical Society (**1999**), 146(2), 448-456
CODEN: JESOAN; ISSN: 0013-4651
PB Electrochemical Society
DT Journal
LA English
AB The primary **current-collector** materials being used in lithium-ion cells are susceptible to environmental degradation: aluminum to pitting corrosion and copper to environmentally assisted cracking. Localized corrosion occurred on bare aluminum electrodes during simulated ambient-temperature cycling in an excess of electrolyte. The highly oxidizing

potential associated with the pos.-electrode charge condition was the primary factor. The corrosion mechanism differed from the pitting typically observed in aqueous electrolytes because each site was filled with a mixed metal/metal-oxide product, forming surface mounds or nodules. Electrochem. impedance spectroscopy was shown to be an effective anal. tool for characterizing the corrosion behavior of aluminum under these conditions. Based on XPS analyses, little difference existed in the composition of the surface film on aluminum and copper after immersion or cycling in LiPF6 electrolytes made with two different solvent formulations. Although Li and P were the predominant adsorbed surface species, the corrosion resistance of aluminum may simply be due to its native oxide. Finally, copper was shown to be susceptible to environmental cracking at or near the lithium potential when specific metallurgical conditions existed (work hardening and large grain size).

IT **37268-38-5**, AA 1145
RL: DEV (Device component use); PRP (Properties); USES (Uses)
(corrosion in LiPF6 electrolyte)

RN 37268-38-5 HCAPLUS

CN Aluminum alloy, base, Al 99.45-100,Fe 0-0.55,Si 0-0.55,Cu 0-0.05,Mg 0-0.05,Mn 0-0.05,Zn 0-0.05,Ti 0-0.03 (AA 1145) (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	99.45 - 100	7429-90-5
Fe	0 - 0.55	7439-89-6
Si	0 - 0.55	7440-21-3
Cu	0 - 0.05	7440-50-8
Mg	0 - 0.05	7439-95-4
Mn	0 - 0.05	7439-96-5
Zn	0 - 0.05	7440-66-6
Ti	0 - 0.03	7440-32-6

RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Attewell, A	1982			Metallurgical Examin	
Braithwaite, J	1997				HCAPLUS
Buchheit, R	1998	54	61	Corrosion	HCAPLUS
Ebner, W	1980	PV 80	265	Power Sources	
Moulder, J	1992			Handbook of X-Ray Ph	
Quinn, R	1982		229	24th National SAMPE	HCAPLUS
Scully, R	1995	138	2229	J Electrochem Soc	
Shifler, D	1995	40	897	Electrochim Acta	HCAPLUS
Wagner, C	1979			Handbook of X-Ray Ph	

L63 ANSWER 13 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1999:162146 HCAPLUS
DN 130:185789
TI Joining of aluminum **battery** case and lid
IN Tanaka, Katsumi; Jogan, Shigetoshi; Morita, Teruki
PA Showa Aluminium Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI JP 11067161 A2 19990309 JP 1997-227116 19970808 <--
PRAI JP 1997-227116 19970808 <--
AB An Al **battery** case is joined to an Al lid with a locally applied braze. A packing or an inner seal is inserted into a fitting groove formed in the lid body. Good dimensional accuracy and hermeticity are obtained without heating the whole **battery** case to a a high temperature
IT **11146-15-9**, Aa3003
RL: DEV (Device component use); USES (Uses)
(packing in joining of aluminum **battery** case and lid by brazing)
RN 11146-15-9 HCAPLUS
CN Aluminum alloy, base, Al 97-98,Mn 1.0-1.5,Fe 0-0.7,Si 0-0.6,Cu 0.05-0.20,Zn 0-0.10 (AA 3003) (9CI) (CA INDEX NAME)

Component	Component Percent			Component Registry Number
Al	97	-	99	7429-90-5
Mn	1.0	-	1.5	7439-96-5
Fe	0	-	0.7	7439-89-6
Si	0	-	0.6	7440-21-3
Cu	0.05	-	0.20	7440-50-8
Zn	0	-	0.10	7440-66-6

L63 ANSWER 14 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1998:432380 HCAPLUS
DN 129:151067
TI Studies on aluminum and its alloy as galvanic anodes in alkaline zincate solution
AU Paramasivam, M.; Iyer, S. Venkatakrishna
CS Central Electrochemical Research Institute, Karaikudi, 630 006, India
SO Corrosion and Its Control, Proceedings of International Conference on Corrosion, Mumbai, Dec. 3-6, 1997 (**1998**), Meeting Date 1997, Volume 2, 974-983. Editor(s): Khanna, A. S.; Totlani, M. K.; Singh, S. K. Publisher: Elsevier, Amsterdam, Neth.
CODEN: 66JLAQ
DT Conference
LA English
AB Aluminum has received much attention as a possible galvanic anode in **primary** alkaline **batteries**, since it has attractive properties such as high energy d. (2500 Ah kg-1), high neg. potential in alkaline media and abundance. But it has drawbacks like high rate of self corrosion, and gassing. Self corrosion of aluminum can be reduced by incorporating inhibitors, complexing agents and addition agents in the electrolyte. Another method is to alloy aluminum with elements such as zinc, indium, gallium, thallium and lead which has yielded a number of successful alloy compns. in alkaline media. Since the corrosion rate of zinc is very low in a highly alkaline solution, the corrosion of aluminum can be reduced by modifying its surface with zinc, by forming a suitable conversion coating over its surface. A suitable zincate coating has been found to be very useful in reducing the self corrosion of different grades of aluminum to a negligible level of 0.04-0.08 mg. cm-2mm-1; while yielding high anode efficiency in alkaline media. In the present study an alkaline zincate coating has been formed on the binary and ternary alloys of 26S and 57S aluminum and the electrochem. behavior of these alloys in alkaline zincate solution has been studied using different techniques such as weight loss
measurements, galvanostatic polarization studies, anode efficiency

measurement, impedance measurements and hydrogen permeation studies. It is found that ternary alloys of both 26S and 57S aluminum containing zinc and indium can serve as good galvanic anodes in alkaline media.

IT **12616-83-0**, 57S
RL: DEV (Device component use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(aluminum and its alloy as galvanic anodes in alkaline zincate solution)

RN 12616-83-0 HCAPLUS

CN Aluminum alloy, base, Al 96-98,Mg 2.2-2.8,Fe 0-0.40,Cr 0.15-0.35,Si 0-0.25,Cu 0-0.10,Mn 0-0.10,Zn 0-0.10 (AA 5052) (9CI) (CA INDEX NAME)

Component	Component Percent			Component Registry Number
Al	97	-	98	7429-90-5
Mg	2.2	-	2.8	7439-95-4
Fe	0	-	0.40	7439-89-6
Cr	0.15	-	0.35	7440-47-3
Si	0	-	0.25	7440-21-3
Cu	0	-	0.10	7440-50-8
Mn	0	-	0.10	7439-96-5
Zn	0	-	0.10	7440-66-6

RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Bharathi, S	1989	5	33	Bulletin of Electroc	HCAPLUS
Kapali, V	1969	14	303	British Corrosion Jo	
Muralidharan, S	1995	142	1478	Journal of Electroch	HCAPLUS
Paramasivam, M	1994	29	207	British Corrosion Jo	HCAPLUS
Paramasivam, M	1991	21	452	Journal of Applied E	HCAPLUS
Sarangapani, K	1984	14	475	Journal of Applied E	HCAPLUS
Sarangapani, K	1985	26	67	Surface Technology	HCAPLUS
Sarangapani, K	1987	22	1	Transanctions of SAE	
Sheik, M	1993	31	47	Indian Journal of Te	
Sheik, M	1989	27	235	Journal of Power Sou	
Subramanyan, N	1969	4	32	British Corrosion Jo	HCAPLUS
Zaromb, S	1967			Proc Symposium on "P	

L63 ANSWER 15 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1994:515245 HCAPLUS

DN 121:115245

TI Extruded aluminum alloy sections for supports of sliding **current collectors** of pantographs

IN Sugyama, Noboru; Okaniwa, Shigeru; Yoshida, Koichi; Kusano, Takuo

PA Nippon Light Metal Co, Japan; Nikkei Giken Kk

SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06054405	A2	19940225	JP 1992-220990	19920729 <--
PRAI	JP 1992-220990		19920729 <--		

AB The extruded sections are manufactured from Al alloy containing Mg 0.6-1.2, Si 0.4-1.3, Cu 0.05-0.4, and addnl. Cr 0.05-0.15, Mn 0.05-0.5, and/or Zr 0.05-0.15%. The Al alloy sections have high resistance to deformation, and show stable elec. behavior.

IT **155534-31-9**
RL: USES (Uses)
(extruded sections, high-strength, for supports of sliding **current collectors** of pantographs)
RN 155534-31-9 HCAPLUS
CN Aluminum alloy, base, Al 97,Mg 1,Si 1,Mn 0.3,Cu 0.2,Cr 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	97	7429-90-5
Mg	1	7439-95-4
Si	1	7440-21-3
Mn	0.3	7439-96-5
Cu	0.2	7440-50-8
Cr	0.1	7440-47-3

L63 ANSWER 16 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1994:487521 HCAPLUS
DN 121:87521
TI Heat management in aluminum/air **batteries**: sources of heat
AU Patnaik, R. S. M.; Ganesh, S.; Ashok, G.; Ganesan, M.; Kapali, V.
CS Central Electrochemical Research Institute, Karaikudi, 623 006, India
SO Journal of Power Sources (**1994**), 50(3), 331-42
CODEN: JPSODZ; ISSN: 0378-7753
DT Journal
LA English
AB One of the problems with the Al/air **battery** is the generation of heat during both idle and discharge periods. The main sources of heat are: (a) corrosion of the Al anode during the idle period, (b) inefficient, or less efficient, dissoln. of anode during discharge, (c) Joule heat during discharge, and (d) non-uniform mass transfer during both discharge and idle periods. These components of heat act in a cumulative way because they are all interconnected. This paper addresses the basic reasons for the origin of these sources of heat. Suitable and practical remedial measures for the effective removal of such heat in the Al/air **battery** are suggested.
IT **12616-83-0**, 57S
RL: USES (Uses)
(anodes, corrosion and temperature rise of, **battery** heat management in relation to)
RN 12616-83-0 HCAPLUS
CN Aluminum alloy, base, Al 96-98,Mg 2.2-2.8,Fe 0-0.40,Cr 0.15-0.35,Si 0-0.25,Cu 0-0.10,Mn 0-0.10,Zn 0-0.10 (AA 5052) (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	97 - 98	7429-90-5
Mg	2.2 - 2.8	7439-95-4
Fe	0 - 0.40	7439-89-6
Cr	0.15 - 0.35	7440-47-3
Si	0 - 0.25	7440-21-3
Cu	0 - 0.10	7440-50-8
Mn	0 - 0.10	7439-96-5
Zn	0 - 0.10	7440-66-6

L63 ANSWER 17 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1993:217911 HCAPLUS
DN 118:217911
TI Manufacture of ceramic-dispersed aluminum alloy contact strips for electric **current collectors**
IN Taguchi, Kazuo; Ozaki, Masanori; Kodachi, Osamu; Kimijima, Kazuhiro
PA Furukawa Electric Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 04365823	A2	19921217	JP 1991-169092	19910614 <--
PRAI JP 1991-169092		19910614 <--		

AB The contact strips are manufactured by centrifugal casting of Al (or Al alloy) melt containing uniformly dispersed ceramic particles in a mold having multiple radially arranged contact strip-shaped cavities; or mixing ceramic- and Al (or Al alloy) powder, loading in metal cans for degassing and subsequent solidifying, and plastic working. The contact strips were manufactured from powdered SiC and ADC10 Al alloy.
IT **12616-75-0**, AA6061
RL: USES (Uses)
(silicon carbide-dispersed, for contact strips of elec. **current collectors**)
RN 12616-75-0 HCAPLUS
CN Aluminum alloy, base, Al 96-99,Mg 0.8-1.2,Si 0.40-0.8,Fe 0-0.7,Cu 0.15-0.40,Cr 0.04-0.35,Zn 0-0.25,Mn 0-0.15,Ti 0-0.15 (AA 6061) (9CI) (CA INDEX NAME)

Component	Component Percent			Component .Registry Number
Al	96	-	99	7429-90-5
Mg	0.8	-	1.2	7439-95-4
Si	0.40	-	0.8	7440-21-3
Fe	0	-	0.7	7439-89-6
Cu	0.15	-	0.40	7440-50-8
Cr	0.04	-	0.35	7440-47-3
Zn	0	-	0.25	7440-66-6
Mn	0	-	0.15	7439-96-5
Ti	0	-	0.15	7440-32-6

L63 ANSWER 18 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1993:217910 HCAPLUS
DN 118:217910
TI Manufacture of aluminum alloy-ceramic fiber composites for contact strips of electric **current collectors**
IN Taguchi, Kazuo; Ozaki, Masanori; Kodachi, Osamu; Kimijima, Kazuhiro
PA Furukawa Electric Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 04365824	A2	19921217	JP 1991-167374	19910613 <--

PRAI JP 1991-167374 19910613 <--

AB The contact strips are manufactured by (1) infiltrating preforms from ceramics fibers (or whiskers) with molten Al (or Al alloy) under applied pressure, and plastic working; (2) placing the preforms in molds having multiple radially arranged contact strip-shaped cavities, and centrifugal casting with molten Al (or Al alloy); (3) casting a melt of Al or Al alloy containing uniformly dispersed ceramic fibers (or whiskers), and plastic working; (4) casting the melt in molds having contact strip-shaped cavities; or (5) mixing ceramic fibers (or whiskers) and Al (or Al alloy) powder, loading in metal cans for degassing and subsequent solidifying, and plastic working.

IT **12616-75-0**, AA6061
RL: USES (Uses)
(composites, with ceramics fibers, for contact strips of elec. **current collectors**)

RN 12616-75-0 HCAPLUS

CN Aluminum alloy, base, Al 96-99,Mg 0.8-1.2,Si 0.40-0.8,Fe 0-0.7,Cu 0.15-0.40,Cr 0.04-0.35,Zn 0-0.25,Mn 0-0.15,Ti 0-0.15 (AA 6061) (9CI) (CA INDEX NAME)

Component	Component Percent			Component Registry Number
Al	96	-	99	7429-90-5
Mg	0.8	-	1.2	7439-95-4
Si	0.40	-	0.8	7440-21-3
Fe	0	-	0.7	7439-89-6
Cu	0.15	-	0.40	7440-50-8
Cr	0.04	-	0.35	7440-47-3
Zn	0	-	0.25	7440-66-6
Mn	0	-	0.15	7439-96-5
Ti	0	-	0.15	7440-32-6

L63 ANSWER 19 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1993:9323 HCAPLUS

DN 118:9323

TI The lithium/bromine trifluoride electrochemical system: an investigation of the factors influencing practical cell designs

AU Pyszczek, Michael F.; Frysz, Christine A.; Ebel, Steven J.

CS Wilson Greantbatch Ltd., Clarence, NY, 14031, USA

SO Journal of the Electrochemical Society (**1992**), 139(11), 3085-90
CODEN: JESOAN; ISSN: 0013-4651

DT Journal

LA English

AB The practical aspects of developing a Li/BrF3 **battery** have been studied. Efforts toward identifying materials for internal cell components via electrochem. testing techniques have resulted in a list of materials suitable for this application. Prototype cells utilizing a spirally wound electrode configuration have been constructed and discharged. Through the use of currently available technol., however, the Li/BrF3 couple has not delivered energy d. comparable to that by other high energy d. systems.

IT **37268-38-5**
RL: USES (Uses)
(compatibility of, for use in lithium/bromine trifluoride **battery**)

RN 37268-38-5 HCAPLUS

CN Aluminum alloy, base, Al 99.45-100,Fe 0-0.55,Si 0-0.55,Cu 0-0.05,Mg 0-0.05,Mn 0-0.05,Zn 0-0.05,Ti 0-0.03 (AA 1145) (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	99.45 - 100	7429-90-5
Fe	0 - 0.55	7439-89-6
Si	0 - 0.55	7440-21-3
Cu	0 - 0.05	7440-50-8
Mg	0 - 0.05	7439-95-4
Mn	0 - 0.05	7439-96-5
Zn	0 - 0.05	7440-66-6
Ti	0 - 0.03	7440-32-6

L63 ANSWER 20 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1986:431808 HCAPLUS
DN 105:31808
TI Candidate materials for the sulfur electrode **current collector**-III. Aluminum/silicon carbide composite materials
AU Tischer, R. P.; Winterbottom, W. L.; Wroblowa, H. S.
CS Ford Motor Co., Dearborn, MI, 48121, USA
SO Corrosion Science (**1986**), 26(5), 377-88
CODEN: CRRSAA; ISSN: 0010-938X
DT Journal
LA English
AB It was previously found that Al and some of its alloys can be used as component materials in high temperature Na-S **batteries**. A study was made of the electrochem. behavior of composite Al/SiC materials in the polysulfide/sulfur m. 350°. Some of the composites studies were found suitable to serve as the material, coating or lining of the pos. **current collector** in Na-S cells.
IT **12616-75-0**
RL: PRP (Properties)
(composites with silicon carbide, pos. **current collector** for sodium/sulfur **batteries**)
RN 12616-75-0 HCAPLUS
CN Aluminum alloy, base, Al 96-99,Mg 0.8-1.2,Si 0.40-0.8,Fe 0-0.7,Cu 0.15-0.40,Cr 0.04-0.35,Zn 0-0.25,Mn 0-0.15,Ti 0-0.15 (AA 6061) (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	96 - 99	7429-90-5
Mg	0.8 - 1.2	7439-95-4
Si	0.40 - 0.8	7440-21-3
Fe	0 - 0.7	7439-89-6
Cu	0.15 - 0.40	7440-50-8
Cr	0.04 - 0.35	7440-47-3
Zn	0 - 0.25	7440-66-6
Mn	0 - 0.15	7439-96-5
Ti	0 - 0.15	7440-32-6

L63 ANSWER 21 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1986:431807 HCAPLUS
DN 105:31807
TI Candidate materials for the sulfur electrode **current collector**-II. Aluminum and its alloys
AU Tischer, R. P.; Wroblowa, H. S.

CS Ford Motor Co., Dearborn, MI, 48121, USA
SO Corrosion Science (**1986**), 26(5), 371-5
CODEN: CRRSAA; ISSN: 0010-938X
DT Journal
LA English
AB In the continuing search for materials for the pos. **current collector**/container of the high-temperature Na-S **battery**, the electrochem. behavior of Al alloys in polysulfide/S melts was examined Electrochem. evidence coupled with SEM surface examination and chemical anal. of the melt showed that Al materials studied remain passive within the 1.25-4.5 V potential range (Na/Na+ ref). The existence of the transpassive region currently reported in the literature was not confirmed. Interpretation of the nature of the observed residual **currents** is suggested. The alloys studied can be used as self-healing substrates of conductive coatings or as matrices of composite materials in contact with the polysulfide/S melts.
IT **12616-75-0**
RL: PRP (Properties)
(anodes, in sodium/sulfur **batteries**)
RN 12616-75-0 HCAPLUS
CN Aluminum alloy, base, Al 96-99,Mg 0.8-1.2,Si 0.40-0.8,Fe 0-0.7,Cu 0.15-0.40,Cr 0.04-0.35,Zn 0-0.25,Mn 0-0.15,Ti 0-0.15 (AA 6061) (9CI) (CA INDEX NAME)

Component	Component Percent			Component Registry Number
Al	96	-	99	7429-90-5
Mg	0.8	-	1.2	7439-95-4
Si	0.40	-	0.8	7440-21-3
Fe	0	-	0.7	7439-89-6
Cu	0.15	-	0.40	7440-50-8
Cr	0.04	-	0.35	7440-47-3
Zn	0	-	0.25	7440-66-6
Mn	0	-	0.15	7439-96-5
Ti	0	-	0.15	7440-32-6

L63 ANSWER 22 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1981:201933 HCAPLUS
DN 94:201933
TI Properties of lithium hexafluoroarsenate
AU Cannon, Raybon C.; Stone, Charles C.; Wiesboeck, Robert A.
CS Atlanta Tech. Cent., Decatur, GA, 30033, USA
SO Proceedings - Electrochemical Society (**1980**), 80-4(Proc. Symp. Power Sources biomed. Implantable Appl. Ambient Temp. Lithium Batteries, 1979), 321-31
CODEN: PESODO; ISSN: 0161-6374
DT Journal
LA English
AB Properties of electrochem.-grade LiAsF6 produced by the USS Agri-Chemical process are discussed. LiAsF6 is commonly used to prepare nonaq. electrolyte solns. for use in Li **batteries**. This salt is a desirable electrolyte material because of its unique stability, high solubility, and high conductivity in a number of organic solvents. The phys. and chemical properties are discussed of LiAsF6, including its purity, solubility in several solvents, thermal and chemical stability, and hygroscopicity. Results of oral and dermal toxicity studies are also included.

IT **12616-75-0**
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(corrosion of, by aqueous lithium hexafluoroarsenate solution)
RN 12616-75-0 HCAPLUS
CN Aluminum alloy, base, Al 96-99,Mg 0.8-1.2,Si 0.40-0.8,Fe 0-0.7,Cu 0.15-0.40,Cr 0.04-0.35,Zn 0-0.25,Mn 0-0.15,Ti 0-0.15 (AA 6061) (9CI) (CA INDEX NAME)

Component	Component Percent			Component Registry Number
Al	96	-	99	7429-90-5
Mg	0.8	-	1.2	7439-95-4
Si	0.40	-	0.8	7440-21-3
Fe	0	-	0.7	7439-89-6
Cu	0.15	-	0.40	7440-50-8
Cr	0.04	-	0.35	7440-47-3
Zn	0	-	0.25	7440-66-6
Mn	0	-	0.15	7439-96-5
Ti	0	-	0.15	7440-32-6

L63 ANSWER 23 OF 23 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1975:114077 HCAPLUS
DN 82:114077
TI Magnesium anode **battery**
IN Jost, Ernest M.
PA Texas Instruments, Inc.
SO U.S., 6 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3849868	A	19741126	US 1970-59858	19700626 <--
PRAI	US 1969-846733	A3	19690801 <--		

AB This **battery** incorporates a sealed container or can formed of a composite metal laminate material having a layer of Mg [7439-95-4] or Mg alloy metallurgically bonded to other easily formed metal layers of the laminate material such as steel, Al, or Al alloys. The laminate material is deep drawn to form the **battery** can with the Mg layer of the laminate on the inner surface of the can to serve as the **battery** anode.
IT **12616-83-0 12720-80-8**
RL: USES (Uses)
(anodes, laminated with magnesium, for carbon **batteries**)
RN 12616-83-0 HCAPLUS
CN Aluminum alloy, base, Al 96-98,Mg 2.2-2.8,Fe 0-0.40,Cr 0.15-0.35,Si 0-0.25,Cu 0-0.10,Mn 0-0.10,Zn 0-0.10 (AA 5052) (9CI) (CA INDEX NAME)

Component	Component Percent			Component Registry Number
Al	97	-	98	7429-90-5
Mg	2.2	-	2.8	7439-95-4
Fe	0	-	0.40	7439-89-6
Cr	0.15	-	0.35	7440-47-3
Si	0	-	0.25	7440-21-3
Cu	0	-	0.10	7440-50-8

Mn	0	-	0.10	7439-96-5
Zn	0	-	0.10	7440-66-6

RN 12720-80-8 HCAPLUS
CN Aluminum alloy, base, Al 93-96,Mg 3.5-4.5,Mn 0.20-0.7,Fe 0-0.50,Si 0-0.40,Cr 0.05-0.25,Zn 0-0.25,Ti 0-0.15,Cu 0-0.10 (AA 5086) (9CI) (CA INDEX NAME)

Component	Component Percent			Component Registry Number
Al	93	-	96	7429-90-5
Mg	3.5	-	4.5	7439-95-4
Mn	0.20	-	0.7	7439-96-5
Fe	0	-	0.50	7439-89-6
Si	0	-	0.40	7440-21-3
Cr	0.05	-	0.25	7440-47-3
Zn	0	-	0.25	7440-66-6
Ti	0	-	0.15	7440-32-6
Cu	0	-	0.10	7440-50-8

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     (FILE 'HOME' ENTERED AT 08:46:08 ON 25 OCT 2006)
               SET COST OFF

     FILE 'REGISTRY' ENTERED AT 08:46:18 ON 25 OCT 2006
               ACT CHUO719/A
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L1   (        23)SEA FILE=REGISTRY ABB=ON  PLU=ON  (100918-13-6/BI OR 11106-92-6
L2   (    360121)SEA FILE=REGISTRY ABB=ON  PLU=ON  7429-90-5/CRN OR AL/ELS OR AL
L3   (     79338)SEA FILE=REGISTRY ABB=ON  PLU=ON  L2 AND (7440-47-3/CRN OR CR/E
L4   (     19508)SEA FILE=REGISTRY ABB=ON  PLU=ON  L3 AND (7440-50-8/CRN OR CU/E
L5   (      6001)SEA FILE=REGISTRY ABB=ON  PLU=ON  L4 AND (7439-95-4/CRN OR MG/E
L6   (      4312)SEA FILE=REGISTRY ABB=ON  PLU=ON  L5 AND (7439-96-5/CRN OR MN/E
L7   (      3742)SEA FILE=REGISTRY ABB=ON  PLU=ON  L6 AND (7440-21-3/CRN OR SI/E
L8   (         2)SEA FILE=REGISTRY ABB=ON  PLU=ON  L1 AND L7
L9   (        15)SEA FILE=REGISTRY ABB=ON  PLU=ON  L1 AND L2 NOT L8
L10  (         2)SEA FILE=REGISTRY ABB=ON  PLU=ON  L9 AND NC>=5
L11  (      3190)SEA FILE=REGISTRY ABB=ON  PLU=ON  L7 AND (7439-89-6/CRN OR FE/E
L12  (      1738)SEA FILE=REGISTRY ABB=ON  PLU=ON  L7 AND (7440-66-6/CRN OR ZN/E
L13  (      1588)SEA FILE=REGISTRY ABB=ON  PLU=ON  L7 AND (7440-32-6/CRN OR TI/E
L14  (       911)SEA FILE=REGISTRY ABB=ON  PLU=ON  L11 AND L12 AND L13
L15  (       348)SEA FILE=REGISTRY ABB=ON  PLU=ON  L14 AND 9/ELC.SUB
L16  (       154)SEA FILE=REGISTRY ABB=ON  PLU=ON  L7 AND 6/ELC.SUB
L17  (       549)SEA FILE=REGISTRY ABB=ON  PLU=ON  L11 AND 7/ELC.SUB
L18  (        41)SEA FILE=REGISTRY ABB=ON  PLU=ON  L12 AND 7/ELC.SUB
L19  (        31)SEA FILE=REGISTRY ABB=ON  PLU=ON  L13 AND 7/ELC.SUB
L20  (      2051)SEA FILE=REGISTRY ABB=ON  PLU=ON  L11 AND (L12 OR L13)
L21  (       427)SEA FILE=REGISTRY ABB=ON  PLU=ON  L20 AND 8/ELC.SUB
L22  (       991)SEA FILE=REGISTRY ABB=ON  PLU=ON  L12 AND L13
L23  (        44)SEA FILE=REGISTRY ABB=ON  PLU=ON  L22 AND 8/ELC.SUB
L24          1596 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L8 OR L10 OR L15 OR L16 OR L
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L25           155 S L24 AND 6/ELC.SUB
L26           154 S L25 AND (AL AND CR AND CU AND MG AND MN AND SI)/ELS
L27            27 S L25 AND AL.MG.CU?/RC
L28            81 S L26 AND AL.MG?/RC
L29            54 S L28 NOT L27
L30            73 S L26 NOT L27-L29

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L31            21 S L27
L32            26 S L29
L33            42 S L30
L34            73 S L31-L33 AND (PY<=2003 OR PRY<=2003 OR AY<=2003)
L35             0 S L34 AND (BERKOWITZ? OR ISSAEV? OR POZIN?)/AU
L36             4 S L34 AND ELECTR?/SC,SX,CW,CT
L37             0 S L34 AND BATTERY
L38             7 S L34 AND (?ELECTROD? OR ?ANOD? OR ?CATHOD? OR ?ELECTROLYT?)
L39            70 S L34 AND P/DT
L40             5 S L39 AND US/PC,PRC,AC
L41             3 S L34 NOT L39
L42            70 S L39 AND (PD<=20031124 OR PRD<=20031124 OR AD<=20031124)
L43             9 S L36,L40
L44            61 S L42 NOT L43
L45            21 S L31 AND L31,L32
L46            28 S L43,L45

=> fil hcaplus
FILE 'HCAPLUS' ENTERED AT 09:00:23 ON 25 OCT 2006
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FILE COVERS 1907 - 25 Oct 2006 VOL 145 ISS 18
FILE LAST UPDATED: 23 Oct 2006 (20061023/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

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L46 ANSWER 1 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2006:142227 HCAPLUS
DN 144:335505
TI Method for producing high-strength large elongation-percentage 6063 aluminum alloy
IN Gan, Weiping; Chen, Tieping; Yang, Fuliang; Zhang, Weiquan; Li, Ke
PA Central South University, Peop. Rep. China; Kingle Aluminium Technology Stock Co., Ltd.
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 6 pp.
CODEN: CNXXEV
DT Patent
LA Chinese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1644736	A	20050727	CN 2005-10031180	20050121
PRAI	CN 2005-10031180		20050121		

AB The title Al alloy contains (by weight percentage) Mg 0.8-0.9, Si 0.65-0.75, Cu 0.85-0.95, Mn 0.15-0.25, Cr 0-0.10, Fe 0-0.23, Zn 0-0.10, Ti 0-0.10, and Al as the balance. The title method comprises (1) smelting at 780-800° and casting at 720-740°, and (b) pressing at 360-440°, quenching in water, and aging at 180-200° for 3-6h. By using this method, the tensile strength of the Al alloy is increased to 280-300 MPa, and the elongation percentage is increased to >13%.

IT **880159-47-7P**
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(method for producing high-strength large elongation-percentage 6063 aluminum alloy)
RN 880159-47-7 HCAPLUS
CN Aluminum alloy, base, Al 97,Cu 0.9,Mg 0.9,Si 0.7,Mn 0.2,Cr 0.1 (9CI) (CA INDEX NAME)

Component Component Component

	Percent	Registry Number
Al	97	7429-90-5
Cu	0.9	7440-50-8
Mg	0.9	7439-95-4
Si	0.7	7440-21-3
Mn	0.2	7439-96-5
Cr	0.1	7440-47-3

L46 ANSWER 2 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:1014504 HCAPLUS
DN 142:9859
TI High strength high ductility Al-Mg-Si alloy for automobiles and railroad cars
IN Hashimoto, Takenori
PA Showa Denko K. K., Japan
SO Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2004332112	A2	20041125	JP 2004-120501	20040415
PRAI JP 2003-114620	A	20030418		

AB The alloy comprises Si 0.1-0.9, Mg 0.7-1.6%, and Al bal. The alloy may further contain Cu 0.1-0.5, Cr 0.05-0.3, and/or Mn 0.05-0.3%. The average grain size of the alloy is ≥30 μm while the relationship between the different of maximum and min. grain size (dr) and the average grain size (da) being dr >da/10. The alloy can be manufactured by extruding or rolling; and the obtained alloy has a tensile strength ≤300 MPa and an elongation of ≥20%.
IT **507278-18-4 797039-62-4 797039-64-6 797039-66-8**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(high strength high ductility Al-Mg-Si alloy for automobiles and railroad cars)
RN 507278-18-4 HCAPLUS
CN Aluminum alloy, base, Al 98,Mg 1,Si 0.6,Cu 0.3,Cr 0.1,Mn 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	98	7429-90-5
Mg	1	7439-95-4
Si	0.6	7440-21-3
Cu	0.3	7440-50-8
Cr	0.1	7440-47-3
Mn	0.1	7439-96-5

RN 797039-62-4 HCAPLUS
CN Aluminum alloy, base, Al 98,Mg 1.5,Si 0.3,Cu 0.2,Cr 0.1,Mn 0.1 (9CI) (CA INDEX NAME)

Component	Component	Component

	Percent	Registry Number
Al	98	7429-90-5
Mg	1.5	7439-95-4
Si	0.3	7440-21-3
Cu	0.2	7440-50-8
Cr	0.1	7440-47-3
Mn	0.1	7439-96-5

RN 797039-64-6 HCAPLUS
CN Aluminum alloy, base, Al 98,Mg 1.5,Cu 0.3,Si 0.3,Cr 0.2,Mn 0.2 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	98	7429-90-5
Mg	1.5	7439-95-4
Cu	0.3	7440-50-8
Si	0.3	7440-21-3
Cr	0.2	7440-47-3
Mn	0.2	7439-96-5

RN 797039-66-8 HCAPLUS
CN Aluminum alloy, base, Al 96-99,Mg 0.7-1.6,Si 0.1-0.9,Cu 0-0.5,Cr 0-0.3,Mn 0-0.3 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	96 - 99	7429-90-5
Mg	0.7 - 1.6	7439-95-4
Si	0.1 - 0.9	7440-21-3
Cu	0 - 0.5	7440-50-8
Cr	0 - 0.3	7440-47-3
Mn	0 - 0.3	7439-96-5

L46 ANSWER 3 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:960319 HCAPLUS
DN 141:398954
TI Manufacture of aluminum alloy sheets with good bendability and surface properties for forming and working
IN Saga, Makoto; Takada, Takeshi; Muramatsu, Toshiki; Hibino, Akira; Noguchi, Osamu
PA Nippon Steel Corp., Japan; Furukawa-Sky Aluminium Corp.
SO Jpn. Kokai Tokkyo Koho, 18 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2004315878	A2	20041111	JP 2003-110645	20030415
PRAI JP 2003-110645		20030415		

AB Al alloy billets containing 0.3-1.0 weight% Mg, 0.5-1.5 weight% Si, 0.01-0.15 weight% Mn and/or 0.001-0.1 weight% Cr at Mn + Cr = 0.1-0.3 weight%, and balance Al are heated to ≥480 to <580°, rolled at 350-500° and draft ≥30%, rolled at 200-400° and draft ≤70%, cooled,

cold-rolled at total draft ≥30%, kept at a solution-treatment temperature of ≥480 to <580° for ≤5 min, cooled at a cooling rate of ≥2°/s to ≥50 to <150°, and kept at ≥50 to <150° for ≥2 h to give the Al alloy sheets having good bendability and surface properties. The Al alloy sheets provide formed and worked products showing good surface properties and no ridging or roughening.

IT **790235-26-6**
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(manufacture of Al alloy sheets with good bendability and surface properties for forming and working)

RN 790235-26-6 HCAPLUS

CN Aluminum alloy, base, Al 96-99,Si 0.5-1.5,Mg 0.3-1,Cu 0-1,Mn 0-0.2,Cr 0-0.1 (9CI) (CA INDEX NAME)

Component	Component Percent			Component Registry Number
Al	96	-	99	7429-90-5
Si	0.5	-	1.5	7440-21-3
Mg	0.3	-	1	7439-95-4
Cu	0	-	1	7440-50-8
Mn	0	-	0.2	7439-96-5
Cr	0	-	0.1	7440-47-3

L46 ANSWER 4 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:726570 HCAPLUS

DN 142:485594

TI Effect of Cu content on intergranular corrosion of a new type Al-Mg-Si alloy

AU He, Li-zi; Chen, Yan-bo; Cui, Jian-zhong; Sun, Xiao-feng; Guan, Heng-rong; Hu, Zhuang-gi

CS Institute of Metal Research, Chinese Academy of Sciences, Shenyang, 110016, Peop. Rep. China

SO Fushi Kexue Yu Fanghu Jishu (2004), 16(3), 129-133
CODEN: FKFJED; ISSN: 1002-6495

PB Fushi Kexue Yu Fanghu Jishu Bianjibu

DT Journal

LA Chinese

AB The effect of Cu content and heat treatment condition on intergranular corrosion behavior of a new type Al-Mg-Si alloys, which is a candidate material for carrier-based aircraft, has been studied by immersion and electrochem. tests. The results of immersion test showed that the mode of corrosion changed from pitting corrosion to intergranular corrosion due to the addition of Cu into the alloy, the degree of corrosion became severe with increasing Cu content. Compared with the alloy under-aged and over-aged, the one treated according to T6 condition showed much strong susceptibility to intergranular corrosion, which was resulted from continuous distribution of ppts. along grain boundaries of the alloy at T6 status. The results of electrochem. test indicated that all the tested alloys may be passivated rapidly. The free corrosion potentials shifted to pos. and the corrosion current densities of the alloys grew with increasing Cu content. The pitting potential, the critical potential for intergranular corrosion and the free corrosion potential shifted to neg. with the increase of aging time. The pitting potential and the free corrosion potential varied with aging time parabolically, however, the critical potential for intergranular corrosion linearly.

IT **852233-98-8 852233-99-9**
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(effect of Cu content on intergranular corrosion of Al-Mg-Si alloy)
RN 852233-98-8 HCAPLUS
CN Aluminum alloy, base, Al 97,Mg 1,Si 0.8,Cu 0.5,Mn 0.4,Cr 0.2 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	97	7429-90-5
Mg	1	7439-95-4
Si	0.8	7440-21-3
Cu	0.5	7440-50-8
Mn	0.4	7439-96-5
Cr	0.2	7440-47-3

RN 852233-99-9 HCAPLUS
CN Aluminum alloy, base, Al 96,Mg 1.1,Cu 1,Si 0.8,Mn 0.4,Cr 0.2 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	96	7429-90-5
Mg	1.1	7439-95-4
Cu	1	7440-50-8
Si	0.8	7440-21-3
Mn	0.4	7439-96-5
Cr	0.2	7440-47-3

L46 ANSWER 5 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:372375 HCAPLUS
DN 140:378978
TI High-strength aluminum alloys for extruded products resistant to corrosion and stress-corrosion cracking
IN Sano, Hideo; Matsuda, Shinichi; Kita, Yasushi
PA Japan
SO U.S. Pat. Appl. Publ., 18 pp.
CODEN: USXXCO
DT **Patent**
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004084119	A1	20040506	US 2003-666216	20030918 <--
	JP 2004149907	A2	20040527	JP 2002-319453	20021101 <--
	EP 1430965	A2	20040623	EP 2003-24720	20031029 <--
	EP 1430965	A3	20050316		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
PRAI	JP 2002-319453	A	20021101 <--		

AB The high-strength Al alloys extruded for structural applications with corrosion resistance contain Si 0.5-1.5, Mg 0.9-1.6, and Cu 0.8-2.5% (with the Si, Mg, and Cu at 3-4% total), optionally with Mn 0.5-1.2, Cr 0.02-0.4, Zr 0.03-0.2, V 0.03-0.2, and/or Zn 0.03-2.0%. The preheated Al-alloy ingot is extruded at ≥450° as a billet or tube having a fibrous structure in ≥60% of the cross-sectional area.

The hot-extruded shapes are quenched to ≤100°, and aged for 2-24 h at 150-200°. The extruded Al-alloy products are suitable as structural parts for automobiles, railroad carriages, or aircraft.

IT **685558-52-5 685558-53-6 685558-54-7 685558-55-8 685558-56-9 685558-57-0 685558-61-6**
RL: TEM (Technical or engineered material use); USES (Uses) (extruded; high-strength Al alloys for extruded parts resistant to stress-corrosion cracking)

RN 685558-52-5 HCAPLUS
CN Aluminum alloy, base, Al 95,Cu 1.8,Mg 1.1,Si 0.9,Mn 0.6,Cr 0.2 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	95	7429-90-5
Cu	1.8	7440-50-8
Mg	1.1	7439-95-4
Si	0.9	7440-21-3
Mn	0.6	7439-96-5
Cr	0.2	7440-47-3

RN 685558-53-6 HCAPLUS
CN Aluminum alloy, base, Al 95,Cu 1.8,Mn 1.2,Mg 1.1,Si 0.9,Cr 0.2 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	95	7429-90-5
Cu	1.8	7440-50-8
Mn	1.2	7439-96-5
Mg	1.1	7439-95-4
Si	0.9	7440-21-3
Cr	0.2	7440-47-3

RN 685558-54-7 HCAPLUS
CN Aluminum alloy, base, Al 95,Cu 1.8,Si 1.2,Mg 1,Mn 0.9,Cr 0.2 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	95	7429-90-5
Cu	1.8	7440-50-8
Si	1.2	7440-21-3
Mg	1	7439-95-4
Mn	0.9	7439-96-5
Cr	0.2	7440-47-3

RN 685558-55-8 HCAPLUS
CN Aluminum alloy, base, Al 95,Cu 1.7,Mg 1.3,Mn 0.9,Si 0.8,Cr 0.2 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	95	7429-90-5
Cu	1.7	7440-50-8

Mg	1.3	7439-95-4
Mn	0.9	7439-96-5
Si	0.8	7440-21-3
Cr	0.2	7440-47-3

RN 685558-56-9 HCAPLUS
CN Aluminum alloy, base, Al 95,Cu 2,Mg 1,Mn 0.9,Si 0.8,Cr 0.2 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	95	7429-90-5
Cu	2	7440-50-8
Mg	1	7439-95-4
Mn	0.9	7439-96-5
Si	0.8	7440-21-3
Cr	0.2	7440-47-3

RN 685558-57-0 HCAPLUS
CN Aluminum alloy, base, Al 96,Si 1.1,Cu 1,Mg 1,Mn 1,Cr 0.2 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	96	7429-90-5
Si	1.1	7440-21-3
Cu	1	7440-50-8
Mg	1	7439-95-4
Mn	1	7439-96-5
Cr	0.2	7440-47-3

RN 685558-61-6 HCAPLUS
CN Aluminum alloy, base, Al 95,Cu 1.8,Mg 1.1,Mn 0.9,Si 0.9,Cr 0.2 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	95	7429-90-5
Cu	1.8	7440-50-8
Mg	1.1	7439-95-4
Mn	0.9	7439-96-5
Si	0.9	7440-21-3
Cr	0.2	7440-47-3

L46 ANSWER 6 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:180190 HCAPLUS
DN 140:221551
TI Manufacture of aluminum alloy automobile parts with good corrosion resistance
IN Kanda, Tomoyuki; Matsuda, Shinichi; Yoshida, Hideo; Fujita, Koichi; Seguchi, Takeshi; Mori, Motohide; Sakuma, Hitoshi
PA Sumitomo Light Metal Industries, Ltd., Japan; Somic Ishikawa Inc.; Toyota Motor Corp.
SO Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DT Patent

LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004068076	A2	20040304	JP 2002-228279	20020806
PRAI	JP 2002-228279		20020806		

AB The alloy comprises Si 0.4-0.8, Mg 0.8-1.2, Cu ≤0.4, Mn 0.08-0.15, Cr 0.1-0.35%, and Al bal. On the cross section of the parts the surface layer has recrystn. microstructure while the other section (50-95% of the cross section) has subgrain structure with average grain size of ≤10 μm. The parts are manufactured from Al alloy ingot by homogenizing at 400-490°, hot extruding at 480-540°, hot forging at 480-540°, solution heat treating at 500-540°, and aging at 150-200°.

IT **666737-43-5**
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(manufacture of aluminum alloy automobile parts with good corrosion resistance)

RN 666737-43-5 HCAPLUS
CN Aluminum alloy, base, Al 97-99,Mg 0.8-1.2,Si 0.4-0.8,Cr 0.1-0.4,Cu 0-0.4,Mn 0.1-0.2 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	97 - 99	7429-90-5
Mg	0.8 - 1.2	7439-95-4
Si	0.4 - 0.8	7440-21-3
Cr	0.1 - 0.4	7440-47-3
Cu	0 - 0.4	7440-50-8
Mn	0.1 - 0.2	7439-96-5

L46 ANSWER 7 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:975857 HCAPLUS
DN 138:59743
TI Aluminum alloy strip having good processability and hardness after baking coating and its manufacture
IN Sato, Yuichi; Mori, Yoichiro; Saga, Makoto
PA Nippon Steel Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002371332	A2	20021226	JP 2002-42805	20020220
PRAI	JP 2001-110750	A	20010410		

AB The Al alloy strip comprises Mg 0.2-1.6, Si 0.4-1.8, Mn 0.03-1.5, and Cr 0.02-0.5 weight%. The strip may have lubricating polymer surface layer soluble in a alkali. The strip is manufactured by heating at 500-600° for ≥1 h after casting.

IT **479026-17-0**
RL: TEM (Technical or engineered material use); USES (Uses)
(Al alloy strip having good processability and hardness after baking coating)

RN 479026-17-0 HCAPLUS

CN Aluminum alloy, base, Al 97,Mg 1,Cu 0.9,Si 0.6,Mn 0.2,Cr 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	97	7429-90-5
Mg	1	7439-95-4
Cu	0.9	7440-50-8
Si	0.6	7440-21-3
Mn	0.2	7439-96-5
Cr	0.1	7440-47-3

L46 ANSWER 8 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2001:777908 HCAPLUS
DN 135:321537
TI Manufacture of aluminum alloy plate with good resistance to filiform rust
IN Matsuda, Shinji; Hattori, Tsutomu; Katsukura, Makoto; Minoda, Tadashi; Yoshida, Hideo; Matsuda, Shinichi; Asano, Mineo; Furuyama, Tsutomu
PA Nissan Motor Co., Ltd., Japan; Sumitomo Light Metal Industries, Ltd.
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT **Patent**
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001295008	A2	20011026	JP 2000-111665	20000413 <--
	JP 3563323	B2	20040908		
	US 2002005232	A1	20020117	US 2001-817765	20010326 <--
	US 6464805	B2	20021015		
PRAI	JP 2000-111665	A	20000413 <--		

AB The alloy comprises Mg 0.25-0.6, Si 0.9-1.1, Cu 0.6-1, Mn ≤0.2 and/or Cr ≤0.1, and Al bal., where 150/㎜2 Q phase (Cu-Mg-Si-Al phase) particles (≥2 μm) exist in the alloy matrix. The alloy plate can be manufactured by homogenizing the alloy ingot at ≥530°, cooling to room temperature, heating at ≥500° for 30 min, cooling at 30°/h to ≤450°, hot rolling, cold rolling, and solution heat treating at ≤550° for ≤30 s. The obtained plate is suitable for automobile body.
IT **367512-95-6**
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(manufacture of aluminum alloy plate with good resistance to filiform rust)
RN 367512-95-6 HCAPLUS
CN Aluminum alloy, base, Al 97-98,Si 0.9-1.1,Cu 0.6-1,Mg 0.2-0.6,Mn 0-0.2,Cr 0-0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	97 - 98	7429-90-5
Si	0.9 - 1.1	7440-21-3
Cu	0.6 - 1	7440-50-8
Mg	0.2 - 0.6	7439-95-4
Mn	0 - 0.2	7439-96-5
Cr	0 - 0.1	7440-47-3

L46 ANSWER 9 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2000:356938 HCAPLUS
DN 132:351272
TI Aluminum alloy sheet with high press formability and hemming processability
IN Nakai, Manabu; Sakata, Mariko
PA Kobe Steel, Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000144294	A2	20000526	JP 1998-322382	19981112
	JP 3802695	B2	20060726		
PRAI	JP 1998-322382		19981112		

AB The Al alloy sheet contains Mg 0.2-1.6, Si 0.2-1.8, Mn 0.01-0.30, and Fe ≤0.30 weight%. The microstructure of the Al alloy sheet after solution treatment has average recrystd. grain size ≤45 μm, average diameter of Al-Fe-based and Mg2Si crystals ≤5 μm, average space between the crystals ≥20 μm, average diameter of dispersion particles 0.02-0.8 μm, and the number of the particles ≥1 per 1 μm3. The Al alloy sheet is useful for manufacturing transport means, such as automobiles and shipping.
IT **270090-87-4**
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(Al alloy sheet with controlled microstructure for press formability and hemming processability)
RN 270090-87-4 HCAPLUS
CN Aluminum alloy, base, Al 98,Mg 0.8,Cu 0.6,Si 0.5,Cr 0.2,Mn 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	98	7429-90-5
Mg	0.8	7439-95-4
Cu	0.6	7440-50-8
Si	0.5	7440-21-3
Cr	0.2	7440-47-3
Mn	0.1	7439-96-5

L46 ANSWER 10 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1998:25185 HCAPLUS
DN 128:105071
TI Aluminum alloy with excellent machining properties and its production
IN Yoshihara, Shinji; Hirano, Masakazu
PA Kobe Steel, Ltd., Japan
SO Ger. Offen., 8 pp.
CODEN: GWXXBX
DT **Patent**
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19727096	A1	19980102	DE 1997-19727096	19970625 <--
	JP 10008175	A2	19980113	JP 1996-186578	19960626 <--

	JP 3301919	B2	20020715		
	JP 2002206132	A2	20020726	JP 2001-361430	19960626 <--
	US 6059902	A	20000509	US 1997-880689	19970623 <--
PRAI	JP 1996-186578	A	19960626 <--		

AB The alloy contains Si 1.5-12, Mg 0.5-6, and optionally Mn 0.5-2, Cu 0.15-3, and/or Cr 0.04-0.35 weight%. The alloy contains addnl. 0.01-0.1 weight% Ti. The average grain size of the compds. of the Si system is 2-20 μm and their surface ratio is 2-12%. The molten alloy is cast into an ingot with dendrite arm spacing of 10-50 μm, soaked at 450-520°, and extrusion formed.

IT **201424-45-5**
RL: TEM (Technical or engineered material use); USES (Uses)
(with excellent machining properties and its production)

RN 201424-45-5 HCAPLUS

CN Aluminum alloy, base, Al 77-97,Si 1.5-12,Mg 0.5-6,Cu 0.2-3,Mn 0.5-2,Cr 0-0.4 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	77 - 97	7429-90-5
Si	1.5 - 12	7440-21-3
Mg	0.5 - 6	7439-95-4
Cu	0.2 - 3	7440-50-8
Mn	0.5 - 2	7439-96-5
Cr	0 - 0.4	7440-47-3

L46 ANSWER 11 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1997:740347 HCAPLUS

DN 128:15444

TI Aluminum-silicon-magnesium alloy for automobile body parts

IN Ehrstrom, Jean-Christophe; Sigli, Christophe; Pillet, Georges

PA Pechiney Rhenalu, Fr.; Kaiser Aluminum & Chemical Corp.; Furukawa Electric Co., Ltd.; Kawasaki Steel Corporation; Ehrstrom, Jean-Christophe; Sigli, Christophe; Pillet, Georges

SO PCT Int. Appl., 15 pp.
CODEN: PIXXD2

DT Patent

LA French

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9741272	A1	19971106	WO 1997-FR755	19970428
	W: CA, MX, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	FR 2748035	A1	19971031	FR 1996-5595	19960429
	FR 2748035	B1	19980703		
	EP 896637	A1	19990217	EP 1997-921897	19970428
	EP 896637	B1	20000524		
	EP 896637	B2	20050727		
	R: CH, DE, ES, GB, IT, LI				
	ES 2146467	T3	20000801	ES 1997-921897	19970428
PRAI	FR 1996-5595	A	19960429		
	WO 1997-FR755	W	19970428		

AB An Al alloy is disclosed for manufacture of automobile body parts. The Al alloy contains Si 0.5-0.8, Mg 0.45-0.65, Cu 0.55-0.75, Mn and/or Cr 0.1-0.3, and (Si + Mg + Cu) 1.6-2.0%. The alloy exhibits a high mech. strength following homogenization at 500-580°, hot rolling to a

thickness of 3-10 mm, cold rolling to a thickness of 0.8-1.5 mm, solution annealing for 20 s-2 min at 500-560°, aging 1 wk at ambient temperature, painting, and paint curing at 150-170°.

IT **199126-52-8**
RL: TEM (Technical or engineered material use); USES (Uses)
(for automobile body parts)
RN 199126-52-8 HCAPLUS
CN Aluminum alloy, base, Al 97-98,Cu 0.6-0.8,Si 0.5-0.8,Mg 0.4-0.6,Cr 0-0.3,Mn 0-0.3 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	97 - 98	7429-90-5
Cu	0.6 - 0.8	7440-50-8
Si	0.5 - 0.8	7440-21-3
Mg	0.4 - 0.6	7439-95-4
Cr	0 - 0.3	7440-47-3
Mn	0 - 0.3	7439-96-5

L46 ANSWER 12 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1997:630681 HCAPLUS
DN 127:251684
TI Manufacture of lightweight aluminum alloy wheels having high durability and corrosion resistance
IN Furuya, Seiichi; Kitahara, Takahiro; Yanada, Shinichi; Kishi, Toshifumi
PA Sumitomo Metal Industries, Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09248649	A2	19970922	JP 1996-87236	19960314
	JP 3185658	B2	20010711		
PRAI	JP 1996-87236		19960314		

AB Al alloys containing Cu 0.5-0.9, Si 0.8-1.2, Mn 0.5-0.7, Mg 0.8-1.2, and Cr 0.1-0.2% are shaped to wheels by ordinarily forging, heating, and mech. working, and the surface of wheels is work hardened by pressing with rotary balls or rollers at 20-120 bar and simultaneously compressive residual stress is imparted to the surface.

IT **195619-54-6 195619-57-9 195619-59-1 195619-61-5**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(manufacture of lightwt. automotive wheels having high durability and corrosion resistance from)
RN 195619-54-6 HCAPLUS
CN Aluminum alloy, base, Al 97,Mg 1.1,Si 1,Mn 0.6,Cu 0.5,Cr 0.2 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	97	7429-90-5
Mg	1.1	7439-95-4
Si	1	7440-21-3
Mn	0.6	7439-96-5

Cu	0.5	7440-50-8
Cr	0.2	7440-47-3

RN 195619-57-9 HCAPLUS
CN Aluminum alloy, base, Al 97,Mg 1.1,Si 1,Cu 0.6,Mn 0.6,Cr 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	97	7429-90-5
Mg	1.1	7439-95-4
Si	1	7440-21-3
Cu	0.6	7440-50-8
Mn	0.6	7439-96-5
Cr	0.1	7440-47-3

RN 195619-59-1 HCAPLUS
CN Aluminum alloy, base, Al 96,Mg 1.1,Si 1,Cu 0.8,Mn 0.6,Cr 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	96	7429-90-5
Mg	1.1	7439-95-4
Si	1	7440-21-3
Cu	0.8	7440-50-8
Mn	0.6	7439-96-5
Cr	0.1	7440-47-3

RN 195619-61-5 HCAPLUS
CN Aluminum alloy, base, Al 96-97,Mg 0.8-1.2,Si 0.8-1.2,Cu 0.5-0.9,Mn 0.5-0.7,Cr 0.1-0.2 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	96 - 97	7429-90-5
Mg	0.8 - 1.2	7439-95-4
Si	0.8 - 1.2	7440-21-3
Cu	0.5 - 0.9	7440-50-8
Mn	0.5 - 0.7	7439-96-5
Cr	0.1 - 0.2	7440-47-3

L46 ANSWER 13 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1997:85205 HCAPLUS
DN 126:93215
TI Processing of hot-worked aluminum alloy stock for improved bake hardenability
IN Shen, Tien H.
PA Kaiser Aluminum & Chemical Corporation, USA
SO PCT Int. Appl., 22 pp.
CODEN: PIXXD2
DT **Patent**
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI WO 9638598 A1 19961205 WO 1996-US5919 19960502 <--
W: CA
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
US 5662750 A 19970902 US 1995-452815 19950530 <--
EP 832308 A1 19980401 EP 1996-913857 19960502 <--
EP 832308 B1 20010801
R: CH, DE, ES, FR, GB, LI
ES 2162053 T3 20011216 ES 1996-913857 19960502 <--
PRAI US 1995-452815 A 19950530 <--
WO 1996-US5919 W 19960502 <--
AB The AA 6000-type Al alloys (containing Si 0.40-1.50, Mg 0.20-1.50, Cu ≤1.20, and Mn and/or Cr 0.02-0.20%) as hot-rolled sheets or hot-worked stock are processed by: (a) solution heat treatment for 2.0 s to 30 min at 900-1100° F; (b) quenching at ≥200° F/s and holding for ≥30 s at ≤350° F; (c) cooling to room temperature, and holding for ≤24 h; and (d) reheating for 2.0 min to 24 h at 150-360° F. The process is suitable for hot-rolled sheets 0.10-0.20 in. thick used in manufacture of automotive body panels finished by painting and baking.
IT **185811-62-5**
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(hot-worked; heat treatment of hot-worked aluminum alloy sheet for improved bake hardenability)
RN 185811-62-5 HCAPLUS
CN Aluminum alloy, base, Al 95-99,Si 0.4-1.5,Mg 0.2-1.5,Cu 0-1.2,Cr 0-0.2,Mn 0-0.2 (9CI) (CA INDEX NAME)

Component	Component Percent			Component Registry Number
Al	95	-	99	7429-90-5
Si	0.4	-	1.5	7440-21-3
Mg	0.2	-	1.5	7439-95-4
Cu	0	-	1.2	7440-50-8
Cr	0	-	0.2	7440-47-3
Mn	0	-	0.2	7439-96-5

L46 ANSWER 14 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1995:446676 HCAPLUS
DN 122:194485
TI Sintered aluminum-magnesium alloy parts having low density and high porosity, and their manufacture
IN Esashi, Kyoyuki
PA Nippon Haiburitsudo Tekunoroji, Japan; Sanso Kk
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 06330215	A2	19941129	JP 1993-122613	19930525
PRAI JP 1993-122613		19930525		

AB The sintered parts are from Al-(5.6-6.5%) Mg alloy. Optional components are Mn ≤0.8, Cr ≤0.5, Si ≤2.2, and Cu ≤2.2%.
The parts are manufactured by mixing powdered starting materials and liquid-phase
sintering in a temperature range in which liquid phase and a solid phase exist together in an equilibrium state.

IT **161908-49-2P**
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(sintered aluminum-magnesium alloy parts having low d. and high porosity and their manufacture)
RN 161908-49-2 HCAPLUS
CN Aluminum alloy, base, Al 88-100,Mg 0.5-6.5,Cu 0-2.2,Si 0-2.2,Mn 0-0.8,Cr 0-0.5 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	88 - 100	7429-90-5
Mg	0.5 - 6.5	7439-95-4
Cu	0 - 2.2	7440-50-8
Si	0 - 2.2	7440-21-3
Mn	0 - 0.8	7439-96-5
Cr	0 - 0.5	7440-47-3

L46 ANSWER 15 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1994:610999 HCAPLUS
DN 121:210999
TI Metal-coated aluminum alloy wire for surfacing
IN Kudo, Kazunao
PA Sumitomo Electric Industries, Japan
SO Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05285690	A2	19931102	JP 1992-95413	19920415
PRAI	JP 1992-95413		19920415		

AB The wire has a core from an Al alloy containing Mg, Si, and Cu, and is coated with a Cu or Cu alloy containing ≤10% Ni, Fe, Si, Ti, Cr, Mg, and/or Mn at 8-50 area % coverage. The Al alloy contains Mg 1.5-5.0, Si 1.0-5.0, and Cu 1.0- 5.0%. The metal for coating is selected from O-free Cu or Cu alloy containing O ≤10, Pb ≤10, and P ≤3 ppm; Ni or Ni alloy containing C ≤0.1, Si ≤0.3, Mn ≤0.2, P ≤0.02, and S ≤0.01%; Fe alloy containing C ≤0.2, Si ≤0.3, Mn ≤0.2, P ≤0.02, and S ≤0.01%; Ti alloy containing C ≤0.1, Si ≤0.3, Mn ≤0.2, P 0.02, and S ≤0.01%; and Fe-Cr-Ni alloy containing Cr 10-25, Ni ≤10, C ≤0.1, Si ≤0.3, Mn ≤0.2, P ≤0.02, and S ≤0.01%. The metal-coated wire is manufactured by coating a core wire ≥6.0 mm in diameter with a selected coating metal, drawing the coated wire at ≥70% reduction, and annealing at 200-400° for 1 min through 24 h, optionally followed by cold drawing at reduction of area ≥50%. The metal-coated wire is used for surfacing of Al alloy parts to improve wear resistance.
IT **153564-50-2 153564-51-3 153564-52-4**
153564-53-5 153564-54-6 153564-55-7
153564-56-8 153564-57-9 153564-58-0
153564-59-1 153564-60-4 153564-61-5
153564-62-6 153564-63-7 153564-64-8
153564-65-9 153564-66-0 153564-67-1
153564-69-3 153564-70-6 153564-71-7
153564-72-8 153564-73-9 153564-74-0

RL: USES (Uses)
(wire, metal-coated, for surfacing of aluminum alloy parts)

RN 153564-50-2 HCAPLUS
CN Aluminum alloy, base, Al 97,Mg 2.5,Si 0.3,Cr 0.1,Cu 0.1,Mn 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	97	7429-90-5
Mg	2.5	7439-95-4
Si	0.3	7440-21-3
Cr	0.1	7440-47-3
Cu	0.1	7440-50-8
Mn	0.1	7439-96-5

RN 153564-51-3 HCAPLUS
CN Aluminum alloy, base, Al 96,Mg 2,Si 1.5,Cr 0.1,Cu 0.1,Mn 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	96	7429-90-5
Mg	2	7439-95-4
Si	1.5	7440-21-3
Cr	0.1	7440-47-3
Cu	0.1	7440-50-8
Mn	0.1	7439-96-5

RN 153564-52-4 HCAPLUS
CN Aluminum alloy, base, Al 97,Cu 1.5,Mg 1.5,Si 0.2,Cr 0.1,Mn 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	97	7429-90-5
Cu	1.5	7440-50-8
Mg	1.5	7439-95-4
Si	0.2	7440-21-3
Cr	0.1	7440-47-3
Mn	0.1	7439-96-5

RN 153564-53-5 HCAPLUS
CN Aluminum alloy, base, Al 96,Mg 3,Si 0.3,Cr 0.1,Cu 0.1,Mn 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	96	7429-90-5
Mg	3	7439-95-4
Si	0.3	7440-21-3
Cr	0.1	7440-47-3
Cu	0.1	7440-50-8
Mn	0.1	7439-96-5

RN 153564-54-6 HCAPLUS
CN Aluminum alloy, base, Al 97,Mg 2.3,Si 0.3,Cr 0.1,Cu 0.1,Mn 0.1 (9CI) (CA

INDEX NAME)

Component	Component Percent	Component Registry Number
Al	97	7429-90-5
Mg	2.3	7439-95-4
Si	0.3	7440-21-3
Cr	0.1	7440-47-3
Cu	0.1	7440-50-8
Mn	0.1	7439-96-5

RN 153564-55-7 HCAPLUS
CN Aluminum alloy, base, Al 97,Mg 2,Si 1,Cr 0.1,Cu 0.1,Mn 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	97	7429-90-5
Mg	2	7439-95-4
Si	1	7440-21-3
Cr	0.1	7440-47-3
Cu	0.1	7440-50-8
Mn	0.1	7439-96-5

RN 153564-56-8 HCAPLUS
CN Aluminum alloy, base, Al 96,Mg 3,Si 1,Cr 0.1,Cu 0.1,Mn 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	96	7429-90-5
Mg	3	7439-95-4
Si	1	7440-21-3
Cr	0.1	7440-47-3
Cu	0.1	7440-50-8
Mn	0.1	7439-96-5

RN 153564-57-9 HCAPLUS
CN Aluminum alloy, base, Al 97,Mg 2.8,Si 0.3,Cr 0.1,Cu 0.1,Mn 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	97	7429-90-5
Mg	2.8	7439-95-4
Si	0.3	7440-21-3
Cr	0.1	7440-47-3
Cu	0.1	7440-50-8
Mn	0.1	7439-96-5

RN 153564-58-0 HCAPLUS
CN Aluminum alloy, base, Al 95,Mg 4,Si 0.3,Cr 0.1,Cu 0.1,Mn 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number

Component	Component Percent	Component Registry Number
Al	95	7429-90-5
Mg	4	7439-95-4
Si	0.3	7440-21-3
Cr	0.1	7440-47-3
Cu	0.1	7440-50-8
Mn	0.1	7439-96-5

RN 153564-59-1 HCAPLUS
CN Aluminum alloy, base, Al 95,Mg 4.8,Si 0.3,Cr 0.1,Cu 0.1,Mn 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	95	7429-90-5
Mg	4.8	7439-95-4
Si	0.3	7440-21-3
Cr	0.1	7440-47-3
Cu	0.1	7440-50-8
Mn	0.1	7439-96-5

RN 153564-60-4 HCAPLUS
CN Aluminum alloy, base, Al 95,Mg 3.5,Si 1,Cr 0.1,Cu 0.1,Mn 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	95	7429-90-5
Mg	3.5	7439-95-4
Si	1	7440-21-3
Cr	0.1	7440-47-3
Cu	0.1	7440-50-8
Mn	0.1	7439-96-5

RN 153564-61-5 HCAPLUS
CN Aluminum alloy, base, Al 94,Mg 2.4,Cu 1.5,Si 1.5,Cr 0.1,Mn 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	94	7429-90-5
Mg	2.4	7439-95-4
Cu	1.5	7440-50-8
Si	1.5	7440-21-3
Cr	0.1	7440-47-3
Mn	0.1	7439-96-5

RN 153564-62-6 HCAPLUS
CN Aluminum alloy, base, Al 96,Mg 2,Cu 1.2,Si 0.8,Cr 0.1,Mn 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	96	7429-90-5
Mg	2	7439-95-4
Cu	1.2	7440-50-8

Si	0.8	7440-21-3
Cr	0.1	7440-47-3
Mn	0.1	7439-96-5

RN 153564-63-7 HCAPLUS
CN Aluminum alloy, base, Al 95,Mg 3.3,Si 1,Cr 0.1,Cu 0.1,Mn 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	95	7429-90-5
Mg	3.3	7439-95-4
Si	1	7440-21-3
Cr	0.1	7440-47-3
Cu	0.1	7440-50-8
Mn	0.1	7439-96-5

RN 153564-64-8 HCAPLUS
CN Aluminum alloy, base, Al 97,Mg 2.6,Si 0.2,Cr 0.1,Cu 0.1,Mn 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	97	7429-90-5
Mg	2.6	7439-95-4
Si	0.2	7440-21-3
Cr	0.1	7440-47-3
Cu	0.1	7440-50-8
Mn	0.1	7439-96-5

RN 153564-65-9 HCAPLUS
CN Aluminum alloy, base, Al 95,Mg 4.4,Si 0.3,Cr 0.1,Cu 0.1,Mn 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	95	7429-90-5
Mg	4.4	7439-95-4
Si	0.3	7440-21-3
Cr	0.1	7440-47-3
Cu	0.1	7440-50-8
Mn	0.1	7439-96-5

RN 153564-66-0 HCAPLUS
CN Aluminum alloy, base, Al 95,Mg 3.3,Si 1.2,Cr 0.1,Cu 0.1,Mn 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	95	7429-90-5
Mg	3.3	7439-95-4
Si	1.2	7440-21-3
Cr	0.1	7440-47-3
Cu	0.1	7440-50-8
Mn	0.1	7439-96-5

RN 153564-67-1 HCAPLUS
CN Aluminum alloy, base, Al 99,Mg 0.5,Si 0.3,Cr 0.1,Cu 0.1,Mn 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	99	7429-90-5
Mg	0.5	7439-95-4
Si	0.3	7440-21-3
Cr	0.1	7440-47-3
Cu	0.1	7440-50-8
Mn	0.1	7439-96-5

RN 153564-69-3 HCAPLUS
CN Aluminum alloy, base, Al 96,Mg 3.5,Si 0.3,Cr 0.1,Cu 0.1,Mn 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	96	7429-90-5
Mg	3.5	7439-95-4
Si	0.3	7440-21-3
Cr	0.1	7440-47-3
Cu	0.1	7440-50-8
Mn	0.1	7439-96-5

RN 153564-70-6 HCAPLUS
CN Aluminum alloy, base, Al 96,Mg 3,Si 1.2,Cr 0.1,Cu 0.1,Mn 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	96	7429-90-5
Mg	3	7439-95-4
Si	1.2	7440-21-3
Cr	0.1	7440-47-3
Cu	0.1	7440-50-8
Mn	0.1	7439-96-5

RN 153564-71-7 HCAPLUS
CN Aluminum alloy, base, Al 95,Mg 4.1,Si 0.3,Cr 0.1,Cu 0.1,Mn 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	95	7429-90-5
Mg	4.1	7439-95-4
Si	0.3	7440-21-3
Cr	0.1	7440-47-3
Cu	0.1	7440-50-8
Mn	0.1	7439-96-5

RN 153564-72-8 HCAPLUS
CN Aluminum alloy, base, Al 96,Mg 2.9,Si 0.5,Cr 0.1,Cu 0.1,Mn 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	96	7429-90-5
Mg	2.9	7439-95-4
Si	0.5	7440-21-3
Cr	0.1	7440-47-3
Cu	0.1	7440-50-8
Mn	0.1	7439-96-5

RN 153564-73-9 HCAPLUS
CN Aluminum alloy, base, Al 95,Mg 4.1,Si 0.5,Cr 0.1,Cu 0.1,Mn 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	95	7429-90-5
Mg	4.1	7439-95-4
Si	0.5	7440-21-3
Cr	0.1	7440-47-3
Cu	0.1	7440-50-8
Mn	0.1	7439-96-5

RN 153564-74-0 HCAPLUS
CN Aluminum alloy, base, Al 96,Mg 2.3,Si 1.3,Cr 0.1,Cu 0.1,Mn 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	96	7429-90-5
Mg	2.3	7439-95-4
Si	1.3	7440-21-3
Cr	0.1	7440-47-3
Cu	0.1	7440-50-8
Mn	0.1	7439-96-5

L46 ANSWER 16 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1994:515245 HCAPLUS
DN 121:115245
TI Extruded aluminum alloy sections for supports of sliding current collectors of pantographs
IN Sugyama, Noboru; Okaniwa, Shigeru; Yoshida, Koichi; Kusano, Takuo
PA Nippon Light Metal Co, Japan; Nikkei Giken Kk
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 06054405	A2	19940225	JP 1992-220990	19920729 <--
PRAI JP 1992-220990		19920729 <--		

AB The extruded sections are manufactured from Al alloy containing Mg 0.6-1.2, Si 0.4-1.3, Cu 0.05-0.4, and addnl. Cr 0.05-0.15, Mn 0.05-0.5, and/or Zr 0.05-0.15%. The Al alloy sections have high resistance to deformation, and show stable elec. behavior.
IT **155534-31-9**

RL: USES (Uses)
(extruded sections, high-strength, for supports of sliding current collectors of pantographs)
RN 155534-31-9 HCAPLUS
CN Aluminum alloy, base, Al 97,Mg 1,Si 1,Mn 0.3,Cu 0.2,Cr 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	97	7429-90-5
Mg	1	7439-95-4
Si	1	7440-21-3
Mn	0.3	7439-96-5
Cu	0.2	7440-50-8
Cr	0.1	7440-47-3

L46 ANSWER 17 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1994:489418 HCAPLUS
DN 121:89418
TI Manufacture of aluminum alloy sheets for stay-on tab type can lid materials
IN Fujikawa, Seiichiro; Koyama, Katsumi; Fujii, Takahiro
PA Furukawa Aluminium, Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05331605	A2	19931214	JP 1992-167045	19920602
PRAI	JP 1992-167045		19920602		

AB Ingots of Al alloy containing Mg 4.0-4.5, Mn 0.1-0.3, Cr 0.05-0.25, Cu 0.05-0.25, and ≥1 of Ti 0.005-0.5 and Si 0.01-0.5% are face cut, homogenized at 450-550° for ≥30 min, hot rolled, immediately heated to 400-550° at ≥100°/min, immediately cooled to 150° at ≥100°/min, and cold rolled at 60-75% draft to obtain Al alloy sheets having high strength and good formability for can lid materials.
IT **154595-25-2P 154595-26-3P**
RL: PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process)
(sheet, with high strength and good formability, manufacture of, for stay-on can lids)
RN 154595-25-2 HCAPLUS
CN Aluminum alloy, base, Al 95,Mg 4.2,Cr 0.2,Cu 0.2,Mn 0.2,Si 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	95	7429-90-5
Mg	4.2	7439-95-4
Cr	0.2	7440-47-3
Cu	0.2	7440-50-8
Mn	0.2	7439-96-5
Si	0.1	7440-21-3

RN 154595-26-3 HCAPLUS
CN Aluminum alloy, base, Al 95,Mg 4,Cr 0.2,Cu 0.2,Mn 0.1,Si 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	95	7429-90-5
Mg	4	7439-95-4
Cr	0.2	7440-47-3
Cu	0.2	7440-50-8
Mn	0.1	7439-96-5
Si	0.1	7440-21-3

L46 ANSWER 18 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1993:565842 HCAPLUS
DN 119:165842
TI Aluminum alloy thin hollow parts with bendability and their preparations
IN Tanishita, Kyohiko; Yoshida, Hideo; Tanaka, Yasuyuki
PA Sumitomo Light Metal Industries, Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05171328	A2	19930709	JP 1991-353954	19911219
PRAI	JP 1991-353954		19911219		

AB Al alloy ingots containing Mg 0.6-1.5, Si 0.6-1.3, Cu 0.05-0.90, Ti 0.001-0.1, B 0.0001-0.01, and Mn 0.10-0.50 and/or Cr 0.05-0.50% are homogenized for 6-10 h at 480-560°; extruded at 500-540°; immediately water-quenched while the alloys are at ≥500°; and tempered for artificial aging, to control the recrystn. structure to ≤100 μm from the surface, and to make mainly the inner part into fibrous structure. The alloys have high strength and are useful for structural members, transportation structures, etc.
IT **150286-94-5**
RL: USES (Uses)
(hollow parts, with bendability and high strength)
RN 150286-94-5 HCAPLUS
CN Aluminum alloy, base, Al 97,Cu 0.8,Mg 0.8,Si 0.8,Mn 0.3,Cr 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	97	7429-90-5
Cu	0.8	7440-50-8
Mg	0.8	7439-95-4
Si	0.8	7440-21-3
Mn	0.3	7439-96-5
Cr	0.1	7440-47-3

L46 ANSWER 19 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1993:259428 HCAPLUS
DN 118:259428
TI Aluminum alloys having good bake hardenability and their manufactures

IN Sasaki, Katsutoshi; Kishino, Kunihiko; Watanabe, Hajime
PA Furukawa Aluminium, Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 04325646	A2	19921116	JP 1991-122452	19910425
PRAI JP 1991-122452		19910425		

AB The alloys containing Cu 0.5-2.5, Mg 0.5-3.0, Si 0.5-3.0, Mn 0.10-0.40, Cr 0.20-1.0, and optionally Zr 0.001-0.5% are solution treated at ≥400° and cooled at cooling rate ≥3°/s. The alloys have excellent formability after solution treatment. Thus, an Al alloy ingot containing Cu 0.64, Mg 0.79, Si 0.88, Mn 0.26, and Cr 0.26% was solution treated at 520° + 10 s and cooled at cooling rate 15°/s had high tensile strength and corrosion resistance after bake-hardening.
IT **147928-28-7P 147928-29-8P**
RL: PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process)
(bake-hardenable, corrosion-resistant, low-temperature solution treatment in manufacture of, for automobile body panels)
RN 147928-28-7 HCAPLUS
CN Aluminum alloy, base, Al 96,Mg 1.7,Cu 1.4,Si 0.9,Mn 0.3,Cr 0.2 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	96	7429-90-5
Mg	1.7	7439-95-4
Cu	1.4	7440-50-8
Si	0.9	7440-21-3
Mn	0.3	7439-96-5
Cr	0.2	7440-47-3

RN 147928-29-8 HCAPLUS
CN Aluminum alloy, base, Al 95,Mg 2.7,Cu 1.3,Si 0.9,Mn 0.3,Cr 0.2 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	95	7429-90-5
Mg	2.7	7439-95-4
Cu	1.3	7440-50-8
Si	0.9	7440-21-3
Mn	0.3	7439-96-5
Cr	0.2	7440-47-3

L46 ANSWER 20 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1993:239015 HCAPLUS
DN 118:239015
TI Manufacture of aluminum alloy extrusion-formed materials having high strength
IN Tanishita, Kyohiko; Yoshida, Hideo; Tanaka, Yasuyuki
PA Sumitomo Light Metal Industries, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04341546	A2	19921127	JP 1991-114477	19910520
	JP 07047806	B4	19950524		
PRAI	JP 1991-114477		19910520		

AB Cast Al alloy ingot containing Mg 0.4-1.5, Si 0.4-1.3, Cu 0.05-0.90, and optionally Mn 0.05-0.50, Cr 0.05-0.30, V 0.05-0.30, and/or Zr 0.05-0.30% is homogenized at 520-560° for 6-10 h, heated to 540-560°, cooled to 460-520° (optimum extrusion temperature), extruded at 460-520°, and press quenched. The extruded Al alloy material having high resistance to stress-corrosion cracking is useful for automobiles, vehicles, and buildings. Thus, an Al alloy billet containing Mg 0.75, Si 0.85, Cu 0.75% was homogenized at 540° for 8 h, heated to 560°, cooled to 500°, extruded, press quenched, and tempered to give an extruded material having high strength and defect-free surface.

IT **147754-70-9**
RL: USES (Uses)
(extrusion-formed, with resistance to stress-corrosion cracking, for automobiles and vehicles)

RN 147754-70-9 HCAPLUS
CN Aluminum alloy, base, Al 97,Cu 0.8,Mg 0.8,Si 0.8,Cr 0.1,Mn 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	97	7429-90-5
Cu	0.8	7440-50-8
Mg	0.8	7439-95-4
Si	0.8	7440-21-3
Cr	0.1	7440-47-3
Mn	0.1	7439-96-5

L46 ANSWER 21 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1992:9922 HCAPLUS
DN 116:9922
TI Manufacture of aluminum alloy sheets for magnetic disk substrates
IN Oda, Tatsuya; Kishino, Kunihiko; Nanbae, Motohiro; Ohara, Kinya; Shibata, Hiroshi
PA Furukawa Aluminum Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 03047656	A2	19910228	JP 1989-178287	19890711
PRAI	JP 1989-178287		19890711		

AB The Al alloy sheets having good metal coatability are manufactured by casting Al alloy containing Mg 2-7, Cu 0.001-1, optionally Mn ≤0.6, Cr ≤0.3, Zr ≤0.3, and/or Ti ≤0.2 with impurities of Si ≤0.15 and Fe ≤0.15 weight% to 2-13 mm thickness. Thus, an Al alloy containing Mg 3.5, Cu 0.028, Si 0.04, and Fe 0.03% was cast to 6 mm

thick, homogenized at 450° for 8 h, rolled to 1.5 mm thick, annealed, polished, and electroless plated with Ni-P alloy. The Ni-P alloy coating had a surface roughness 0.021 μm and no surface defect.

IT **137922-52-2**
RL: USES (Uses)
(sheets, casting of, for magnetic disk substrates)
RN 137922-52-2 HCAPLUS
CN Aluminum alloy, base, Al 96,Mg 3.7,Cr 0.1,Cu 0.1,Mn 0.1,Si 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	96	7429-90-5
Mg	3.7	7439-95-4
Cr	0.1	7440-47-3
Cu	0.1	7440-50-8
Mn	0.1	7439-96-5
Si	0.1	7440-21-3

L46 ANSWER 22 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1990:557084 HCAPLUS
DN 113:157084
TI Aluminum alloy plates for wheel rims and their manufacture
IN Kanbayashi, Miki; Takabayashi, Atsuo; Takashima, Takumi; Yamamoto, Yosuke
PA Furukawa Aluminum Co., Ltd., Japan; Chuo Seiki K. K.
SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 02153038	A2	19900612	JP 1988-306003	19881205
PRAI	JP 1988-306003		19881205		

AB The plates with excellent brightness and strength are manufactured from an Al alloy containing Mg 3.5-6, Mn 0.05-0.5, Cu 0.05-0.5, Si 0.05-0.4, Fe <0.15, and Cr 0.05-0.3, Zr 0.05-0.3, Ti 0.001-0.1, and/or B 0.0001-0.002% by hot rolling, optional cold rolling, heating to 340-550° at ≥1°/min, holding for 10 s-4 h, and by cooling to room temperature The resp. tensile strength, yield strength, elongation, and reflectivity for an Al alloy plate containing Mg 3.8, Mn 0.4, Cu 0.5, Si 0.1, Cr 0.1, Ti 0.02, and Fe 0.05% prepared according to the invention were 29.5, 13.1 kg/mm2, 27%, and 81% vs. 22.5, 8.5 kg/mm2, 34%, and 82% for the similarly prepared Al alloy plate containing Mg 3.0, Ti 0.02, and Fe 0.05%.

IT **129827-91-4 129827-92-5 129827-94-7**
RL: PROC (Process)
(rolling and heat treatment of, for automobile wheel rims)
RN 129827-91-4 HCAPLUS
CN Aluminum alloy, base, Al 95,Mg 3.8,Cu 0.5,Mn 0.4,Cr 0.1,Si 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	95	7429-90-5
Mg	3.8	7439-95-4
Cu	0.5	7440-50-8
Mn	0.4	7439-96-5

Cr	0.1	7440-47-3
Si	0.1	7440-21-3

RN 129827-92-5 HCAPLUS
CN Aluminum alloy, base, Al 95,Mg 4.2,Mn 0.2,Si 0.2,Cr 0.1,Cu 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	95	7429-90-5
Mg	4.2	7439-95-4
Mn	0.2	7439-96-5
Si	0.2	7440-21-3
Cr	0.1	7440-47-3
Cu	0.1	7440-50-8

RN 129827-94-7 HCAPLUS
CN Aluminum alloy, base, Al 94,Mg 5.5,Si 0.4,Mn 0.2,Cr 0.1,Cu 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	94	7429-90-5
Mg	5.5	7439-95-4
Si	0.4	7440-21-3
Mn	0.2	7439-96-5
Cr	0.1	7440-47-3
Cu	0.1	7440-50-8

L46 ANSWER 23 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1990:203362 HCAPLUS
DN 112:203362
TI Manufacture of aluminum alloy parts for electric and electronic devices
IN Muramatsu, Toshiki; Matsuo, Mamoru
PA SKY Aluminium Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 01162754	A2	19890627	JP 1987-319980	19871217 <--
PRAI JP 1987-319980		19871217 <--		

AB The parts, especially for lead frames, connectors, or switches, are manufactured from an Al alloy containing 0.2-3.0 Mg and 0.2-2.5% Si by solution treatment at 480-560°, quenching at ≥1°/s, artificial aging at 100-200°, cold rolling, artificial aging at 100-200, cold rolling, and optionally finish annealing at 100-200°. The parts had tensile strength 44.0-50.0 kg/mm2, elongation 3-7%, elec. conductivity 6-12% IACS, and good bendability and solderability.
IT **126915-76-2**
RL: USES (Uses)
(heat treatment and rolling of, for elec. and electronic devices)
RN 126915-76-2 HCAPLUS
CN Aluminum alloy, base, Al 96,Si 1.2,Mg 1.1,Cu 1,Mn 0.7,Cr 0.1 (9CI) (CA

INDEX NAME)

Component	Component Percent	Component Registry Number
Al	96	7429-90-5
Si	1.2	7440-21-3
Mg	1.1	7439-95-4
Cu	1	7440-50-8
Mn	0.7	7439-96-5
Cr	0.1	7440-47-3

L46 ANSWER 24 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1988:42470 HCAPLUS
DN 108:42470
TI Aluminum alloys for electric lead frames
IN Kosuge, Haruyumi; Kamio, Katsuaki; Sano, Tomoaki; Ito, Koichi; Nakajima, Nobuaki; Uzawa, Sumiyo
PA Nippon Light Metal Co., Ltd., Japan; Toshiba Corp.
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62096644	A2	19870506	JP 1985-236382	19851024 <--
	JP 05080540	B4	19931109		
PRAI	JP 1985-236382		19851024 <--		

AB The alloys contain Cu 3.0-6.5, Mg 0.02-1.7, and Si 0.02-0.5% with ≥1 of Mn 0.20-1.0, Cr 0.10-0.30, Zr 0.05-0.25, and/or V 0.05-0.20% added to improve the heat resistance and refines the grain size. The alloys can be manufactured at a low cost. Thus, an ingot (containing Cu 6.0, Mn 0.30, Zr 0.15, V 0.05, and Si 0.05%) was hot-rolled into a plate 5 mm thick, solution heat treated, quenched in water, cold-rolled into a sheet 0.5 mm thick, and precipitation-hardened at 200°. The sheet held at 275° for 30 s to simulate soldering showed tensile strength 44.4 kg/mm2, Vickers hardness 124, good flexibility in a bending test elec. conductivity 34.9% of IACS, and good solderability.
IT **112437-55-5**
RL: USES (Uses)
(sheet, for elec. lead frames, flexibility after soldering of)
RN 112437-55-5 HCAPLUS
CN Aluminum alloy, base, Al 93,Cu 4.5,Mg 1.4,Si 0.4,Mn 0.3,Cr 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	93	7429-90-5
Cu	4.5	7440-50-8
Mg	1.4	7439-95-4
Si	0.4	7440-21-3
Mn	0.3	7439-96-5
Cr	0.1	7440-47-3

L46 ANSWER 25 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1988:42468 HCAPLUS
DN 108:42468
TI Aluminum alloys for electric lead frames
IN Kosuge, Haruyumi; Kamio, Katsuaki; Sano, Tomoaki; Ito, Koichi; Nakajima, Nobuaki; Uzawa, Sumiyo
PA Nippon Light Metal Co., Ltd., Japan; Toshiba Corp.
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62096638	A2	19870506	JP 1985-236380	19851024 <--
	JP 05055582	B4	19930817		
PRAI	JP 1985-236380		19851024 <--		

AB The alloys contain Mg 0.4-1.5, Si 0.4-0.8, Cu 0.02-0.5, and ≥1 of Mn 0.20-1.2, Cr 0.10-0.30, Zr 0.05-0.25, and V 0.05-0.20%. Addition of Mn, Cr, Zr, and/or V improves alloy heat resistance, refines grain size. The alloys can be manufactured at a low cost. Thus, Al-alloy ingot (containing Mg 1.0, Si 0.6, Cu 0.15, Mn 0.50, and Zr 0.10%) was hot-rolled into a plate 5 mm thick, cold-rolled into a sheet 1.2 mm thick, solution heat treated, quenched in water, cold rolled to 0.5 mm thickness, and precipitation-hardened at 200°. The sheet held at 275° for 30 s to simulate hard soldering showed tensile strength 32.5 kg/mm2, Vickers hardness 105, good flexibility in a bending test, elec. conductivity 34.5% of IACS, and good solderability.
IT **112437-44-2**
RL: USES (Uses)
(formability of sheet of, for elec. lead frames)
RN 112437-44-2 HCAPLUS
CN Aluminum alloy, base, Al 98,Mg 0.5,Si 0.5,Cu 0.4,Mn 0.2,Cr 0.1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	98	7429-90-5
Mg	0.5	7439-95-4
Si	0.5	7440-21-3
Cu	0.4	7440-50-8
Mn	0.2	7439-96-5
Cr	0.1	7440-47-3

L46 ANSWER 26 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1984:143596 HCAPLUS
DN 100:143596
TI High-strength aluminum alloy composite with high pitting corrosion resistance
PA Mitsubishi Aluminum Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 58164748	A2	19830929	JP 1982-47735	19820325

JP 02019180 B4 19900427
PRAI JP 1982-47735 19820325
AB The Al sheet composites consist of (1) Al alloy core containing Si 0.2-0.8, Mg 0.4-1.2, and optionally ≥1 Cu 0.1-0.5, Mn 0.1-0.4 and Cr 0.1-0.4, (2) Al alloy cladding on 1 or both surfaces containing Mg 0.1-1.2 and Zn 0.1-1.5 weight%, and optionally (3) Al-Si brazing alloy cladding. The core of the composite has high mech. strength; the cladding, which has high pitting corrosion resistance, prevents corrosion of the core by a sacrificial anode effect. The composites are useful for heat exchangers such as automobile radiators. Thus, an Al alloy [89513-54-2] core plate 8 mm thick containing Mg 0.69 and Si 0.41 weight% with an Al alloy [89513-55-3] 1 mm thick cladding on both major surfaces and containing Mg 0.78 and Zn 0.51 weight% was hot rolled, cold rolled, annealed 3 min at 600° in a N atmospheric, air cooled, and aged 3 h at 180° to give an Al alloy composite 0.5 mm thick with a tensile strength of 23.8 kg/mm2, elongation 11.2% and increased corrosion resistance in water containing Cu2+, Cl-, SO42-, and HCO3-.
IT **89513-52-0**
RL: USES (Uses)
(composites of, clad with aluminum alloy containing zinc, for automobile radiators)
RN 89513-52-0 HCAPLUS
CN Aluminum alloy, base, Al 98-99,Mg 0.4-1,Si 0.2-0.6,Cu 0-0.3,Cr 0-0.2,Mn 0-0.2 (9CI) (CA INDEX NAME)

Component	Component Percent			Component Registry Number
Al	98	-	99	7429-90-5
Mg	0.4	-	1	7439-95-4
Si	0.2	-	0.6	7440-21-3
Cu	0	-	0.3	7440-50-8
Cr	0	-	0.2	7440-47-3
Mn	0	-	0.2	7439-96-5

L46 ANSWER 27 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1980:430516 HCAPLUS
DN 93:30516
TI Corrosion of aluminum and its alloys. II. Stability of aluminum alloys
AU Elustondo, J.
CS Spain
SO Revista Iberoamericana de Corrosion y Proteccion (1979), 10(Sept.-Oct.), 7-17
CODEN: RCPRDQ; ISSN: 0210-6604
DT Journal
LA Spanish
AB Stress corrosion was determined for Al (AA 1100), and for the Al-Cu AA2000 [74079-56-4], Al-Mn AA 3000 [74079-55-3], Al-Si AA 4000 [74079-54-2], Al-Mg AA 5000 [74079-53-1], Al-Mg2Si AA 6000 [**74079-52-0**], Al-Zn AA 7000 [74079-51-9], and AA 8000 alloy series. Tension-loaded specimens were exposed to corrosion in alkaline, acid, or chloride solns. at different temps. The Al, AA 3000, AA 4000, and AA 5000 (Mg <4%) were not susceptible to corrosion at low stress. Cracks produced by corrosion at low stress were intercryst. The Al-Cu and Al-Zn alloys showed lower resistance to low-stress corrosion than the other alloys. However, the Al-Cu and Al-Zn alloys responded well to cathodic protection. Anodized Al-Cu showed lower corrosion resistance than Al. Mn had little effect on corrosion resistance. The Al-Si alloys were inert in all corrosive media.

The resistance of Al-Mg alloys against sea water and weak bases was better than that of Al. Under some conditions, the addition of 1% Zn to Al-Mg alloys increased their intergranular corrosion resistance. The presence of Cr or Mn favored the production of a yellow or golden color during during anodic oxidation

IT **74079-52-0**
RL: RCT (Reactant); RACT (Reactant or reagent)
(corrosion cracking of)

RN 74079-52-0 HCAPLUS

CN Aluminum alloy, base, Al 89-99,Mg 0.3-5,Si 0.3-3,Mn 0-1.2,Cu 0-1,Cr 0-0.4 (9CI) (CA INDEX NAME)

Component	Component Percent			Component Registry Number
Al	89	-	99	7429-90-5
Mg	0.3	-	5	7439-95-4
Si	0.3	-	3	7440-21-3
Mn	0	-	1.2	7439-96-5
Cu	0	-	1	7440-50-8
Cr	0	-	0.4	7440-47-3

L46 ANSWER 28 OF 28 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1976:424699 HCAPLUS

DN 85:24699

TI Aluminum alloy of age hardening type

IN Baba, Yoshio; Kawai, Mituhiro

PA Sumitomo Light Metal Industries, Ltd., Japan

SO U.S., 4 pp.
CODEN: USXXAM

DT **Patent**

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 3935007	A	19760127	US 1974-523534	19741113 <--
PRAI US 1974-523534	A	19741113 <--		

AB The age-hardening Al alloy [**59369-66-3**] contains Cu 1.4-1.8, Mg 0.5-1.0, Si 0.5-0.6, Mn 0-0.2, Cr 0-0.2 and optional minor amts. of V, Ti, and/or Zr. The alloy is suitable for deep drawing without leaving any stretcher strains. The alloys have improved strength after paint-curing baking compared to that of conventional Al alloys. The alloys are useful for cans, caps, blinds, and automobile car bodies.

IT **59369-66-3**
RL: USES (Uses)
(age hardenable, for deep drawing)

RN 59369-66-3 HCAPLUS

CN Aluminum alloy, base, Al 97,Cu 1.4-1.8,Mg 0.5-1,Si 0.5-0.6,Cr 0-0.2,Mn 0-0.2 (9CI) (CA INDEX NAME)

Component	Component Percent			Component Registry Number
Al	97			7429-90-5
Cu	1.4	-	1.8	7440-50-8
Mg	0.5	-	1	7439-95-4
Si	0.5	-	0.6	7440-21-3
Cr	0	-	0.2	7440-47-3
Mn	0	-	0.2	7439-96-5

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